

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN**

MILWAUKEE ELECTRIC TOOL
CORPORATION, METCO BATTERY
TECHNOLOGIES LLC, AC (MACAO
COMMERCIAL OFFSHORE) LIMITED,
and TECHTRONIC INDUSTRIES CO.
LTD.,

Plaintiffs,

v.

SNAP-ON INCORPORATED,

Defendant.

Case No. 14-CV-1296-JPS

ORDER

This is a patent case about lithium-ion batteries used in power tools. Before the Court are the parties' claim construction briefs and their cross-motions for summary judgment. For the reasons stated below, the Court adopts Plaintiffs' proposed claim construction in all respects. The Court further finds that Snap-On has not proffered sufficient undisputed facts to warrant summary judgment on the grounds of derivation or pre-suit damages. Likewise, Plaintiffs have not shown that the undisputed facts support application of assignor estoppel against Snap-On, although IPR estoppel does operate to bar some uses of some of Snap-On's prior art references. Finally, the Court determines that there is an insufficient factual basis for Snap-On's claim of invalidity, its inequitable conduct defense, and certain aspects of its anticipation defense, and so these will not be permitted to proceed to trial.

1. BACKGROUND

Plaintiffs assert infringement of the following claims against Snap-on: claims 1 and 8–10 of U.S. Patent No. 7,554,290 (the “‘290 Patent”), claims 1, 4, 5, 7–13, and 16–19 of U.S. Patent No. 7,999,510 (the “‘510 Patent”), and claims 1, 8–10, 12, and 13 of U.S. Patent No. 7,944,173 (the “‘173 Patent”). Independent claim 1 of the ‘290 Patent, which is representative of its counterparts, recites

a battery pack for power a hand held power tool, the battery pack comprising:

a housing connectable to and supportable by the hand held power tool; and

a plurality of battery cells supported by the housing, the battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps, the battery cells having a lithium-based chemistry.

(Docket #187-1 at 77). Further, later claims provide, in relevant part, that the pack’s battery cells each have “a nominal voltage of 4.2 volts” and that they have “a capacity of approximately 3.0 ampere-hours [(“Ah”).” *Id.*

Because of the vast factual record presented, the Court will provide here a broad overview of the relevant background and timeline. Facts pertinent only to one narrow argument or another will be discussed at the appropriate juncture. This may lead to some repetition, but the Court has found no better way to fully and fairly treat each matter for decision.¹

¹The Court pauses here to note that the parties often treated their factual briefing as a sandbox for gratuitous sniping at each other. Even when the core, material fact at issue could not be disputed, they rarely overlooked a chance to disagree over minutiae. Additionally, in stating the facts, they often included their own interpretive gloss on the document or testimony in question, which invited

Power-tool companies, including Plaintiff Milwaukee Electric Tool Corporation (“Milwaukee”), began manufacturing high-power cordless tools in the 1980s, and those power tools were traditionally powered by nickel-cadmium (“NiCd”) or nickel-metal hydride (“NiMH”) battery cells contained in battery packs. In the 1980s and 1990s, lithium-based battery technology emerged, and was initially used in low-power applications such as cell phones and laptop computers, later migrating to high-power applications such as electric automobiles and satellites.

Canadian battery manufacturer E-One Moli Energy (Canada) Ltd. (“Moli”) was “a world leading manufacturer and researcher of lithium-ion (“Li-ion”) batteries,” and had a “large and accomplished world class team” that took on “pioneering roles in the advancement of lithium-ion technology.” (Docket #187-26 at 8–9). Like other battery makers, Moli initially focused on low-power applications, but by the early 2000s it was focused on high-power uses, including power tools, for which it developed battery cells.

In June 2001, Mark Reid (“Reid”), a Moli employee, prepared a presentation for toolmaker Bosch called the “Bosch 24V Power Tools Presentation.” In the presentation, Reid showcased Moli’s Li-ion battery

further unnecessary disputes as to what a document actually said or what a witness’ testimony actually was.

This behavior made the work of the Court more onerous, as it forced the Court to carefully comb the record for the true facts, including the parties’ competing statements of fact, which totaled hundreds of pages, and the thousands of pages of exhibits attached thereto. The Court will not expend its limited resources resolving every minor evidentiary dispute the parties attempted to raise. Material disputes will be discussed; anything less will not. The Court expects that the parties’ pretrial submissions will be formulated in a more cooperative fashion with a focus on the clear, cogent presentation of the issues to be decided at trial.

packs. Two videos embedded in the presentation show a Moli employee using a Bosch reciprocating saw retrofitted with Moli Li-ion cells cutting steel pipe and wood. The presentation goes on to describe the benefits of replacing NiCd battery cells with Li-ion ones, including increased power, reduced weight, and longer shelf life. The presentation also depicted common NiCd battery pack features, including a housing, connectability of the pack to the tool, and a locking assembly.

On July 25, 2001, a sales representative of Moli wrote to Milwaukee, attaching a modified version of the Bosch presentation, as well as a “Power 2000” presentation created by Moli scientist Ulrich von Sacken (“von Sacken”), which described Moli’s Li-ion cells and promoted their ability to provide cost-effective power for high-power applications. Moli’s sales representative also visited the company in July 2001 to introduce Milwaukee to the Moli cells.

A month later, on August 27, 2001, Milwaukee product manager David Selby (“Selby”) met with a Moli representative. In an email to his colleagues the next day, he said that during the meeting he heard “disturbing news.” (Docket #187-33 at 2). Moli had apparently reported to him that it was working with other power tool manufacturers to develop Li-ion battery packs. *Id.* He said that Milwaukee nevertheless wanted to evaluate sample packs, and he set up a second meeting for September 18, 2001.

Moli provided two sample battery packs on September 24, 2001. Jan Reimers (“Reimers”), a Moli scientist, stated that the packs’ designated discharge currents, such as “20A”—meaning “20 amps”—denoted “the maximum current that the cell can be discharged at and still return >70% of

the rated capacity.” (Docket #187-3 at 2). The battery packs sent in September 2001 were designated 15A.

At this point, it is helpful to foreshadow one of the forthcoming claim construction disputes. As noted above, independent claim 1 of the ’290 Patent and independent claims 1, 9, 10, 12, 16, and 18 of the ’510 Patent recite “the battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps.” This is known as the “20 Amp Limitation.”² Much of the parties’ disagreement regarding construction of the 20 Amp Limitation revolves around how to test it—in particular, how to measure the “average discharge current” of a battery pack. The facts regarding cell testing and development, discussed further below, will feature prominently in resolving that and other disputes.

As noted above, Moli created two prototype packs, each comprised of a housing and a plurality of five Li-ion 15A cells connected in series. One of the named inventors of the patents-in-suit, Gary Meyer (“Meyer”), a Milwaukee employee, tested the prototype packs during the period of September 26 through October 11, 2001. First, he used a constant-current discharge test, in which the pack was configured to discharge at a constant current of 20 amps to see if it could provide this current over its entire capacity without failing. Moli’s prototype packs failed this test, as they were able to deliver 20 amps only for a short time, delivering just a fraction of their entire rated capacity of 3.0 Ah before experiencing voltage crash, ending the test. (Docket #201 ¶ 41).

²Independent claim 1 of the ’173 Patent recites “the battery cells being capable of producing an average battery pack discharge current greater than or equal to approximately 20 amps.” The wording of this claim is slightly different than the other patents-in-suit, but the parties agree that the difference is not material.

Meyer also performed a cutting test, in which he attached a prototype pack to a circular saw and made cuts through wood. The prototype pack was observed to produce an average discharge current of 26.19 amps. However, the results showed that the actual performance of the pack ranged from over 50 amps to near zero during the course of the test. The pack was able to power the circular saw to make 34–37 cuts. Nevertheless, Meyer saw the test as a failure and concluded that the prototype pack was “unsuitable for use with a power tool requiring high discharge currents” because “the temperature of the Pack rapidly increased above acceptable levels” and the voltage of the pack fell below acceptable levels during the cuts. (Docket #187-17 at 74–75). Indeed, as Meyer saw it, the test essentially destroyed the pack. (Docket #201 ¶¶ 36–37).

In addition, Meyer performed a pulsed current discharge test. During that test, the prototypes were able to deliver at least one period of constant-current discharge of 20 amps of a little over three minutes. The packs were still not able to deliver that current for their entire rated capacity.

As it will be important later in considering Snap-On’s inequitable conduct defense, it should be noted here that in 2009, during the prosecution of the ‘290 Patent, Plaintiffs disclosed the test results of this initial testing of the prototype packs. The results were submitted as an attachment to a declaration Meyer submitted to the United States Patent and Trademark Office (“PTO”). The PTO considered these results before granting the patent. In fact, the examiner first mistakenly believed the test results from the prototype packs were results of Plaintiffs’ testing of the claimed packs and rejected the application on the basis that the results showed an inoperative and unsafe invention. When Plaintiffs informed the

examiner that the prototype packs were not theirs but were the early Moli prototypes, the examiner reversed his decision and granted the '290 Patent.

On October 16, 2001, Moli sent several more presentations to Milwaukee promoting the advantages of their Li-ion batteries over existing chemistries. Next, Meyer performed another cutting test on the prototype packs on October 17, 2001. During this test, Meyer made concurrent cuts into a board without shutting the saw off between cuts. The pack was able to make a little more than half the total number of cuts before it overheated and stopped. He allowed the pack to cool and finish making his cuts. In total, the pack powered 70 cuts.

Again, as will be later relevant, Meyer did not mention this test in his 2009 declaration to the PTO. Plaintiffs explain that the test was not disclosed because there were no formal test results compiled from it. Moreover, Plaintiffs contend that this test, like the first cutting test, was a failure because it destroyed the pack in the process. However, Meyer did report this test to Moli employee Blair Tweten ("Tweten"), in response to Tweten's email trying to set up an additional meeting. Tweten explained that Moli could offer "insite [sic] into cell chemistry and potential changes [they] may be able to offer." (Docket #187-18 at 3). Meyer responded in an excited tone that he was able to use the prototype pack to make 70 cuts with a circular saw, although he was forced to give it a break in the middle because it overheated.

That same day, Meyer informed Selby, among others, that he had done some "quick tests" on the Moli cells and found that they "did much better than their published specification sheet [and] ran some of our tools OK." (Docket #209-54 at 2). While he expressed that there were "[s]till issues

of cycle life, safety, etc.," he concluded that the cells were promising enough that it was "definitely worth doing some further investigation." *Id.*

On October 23, 2001, Milwaukee employees traveled to Canada to tour Moli's facility and to discuss working together. Milwaukee's presentation during the meeting appears to describe the various packs it produced, as well as those of competitors. *See* (Docket #187-37). On October 29, 2001, Selby sent an email to Meyer and Jeffrey Zeiler ("Zeiler"), another of the named inventors, attaching a forecast of sales of Li-ion battery packs. (Only the email, and not the forecast, appears to have been provided in the record.) On October 30, 2001, Zeiler emailed Tweten indicating that Milwaukee was sending Moli two driver-drill kits to give Moli "the opportunity to play with them and get a feel for the power required to run them." (Docket #187-39 at 2).

On November 1, 2001, von Sacken sent an email to Meyer and Zeiler in which he suggested that Moli provide higher power cells in the form of packs with three parallel high power 18650 cells, with a total capacity of 3 Ah, in place of the 15A-26650 cells, since, in von Sacken's opinion, Milwaukee seemed to want to use the cells in the circular saw "and other power hungry applications." (Docket #209-22 at 2). Moli provided a pack of 18650 cells to Milwaukee on December 17, 2001, in which five cells were placed in series with three strings in parallel.

On November 26, 2001, Reimers sent an email to Meyer and Zeiler enclosing a report that detailed certain trade-offs between cells optimized for high energy (the 15A cells included in the prototype packs) and those optimized for high power (25A and higher cells), including "1) some typical spinel cycle life data, 2) more information on the capacity/cycle-life trades

offs [sic], and 3) some low voltage recovery data.” (Docket #187-40).³ In this report, Reimers discusses various Li-ion cells that could be made for Milwaukee battery packs, including 15A-26650-R1, 25A-26650-R1, and 40A-26650-R1 cells.

On November 27, 2001, Reimers sent an email to Milwaukee following up on a November 15 conference call. In the email, Reimers confirmed that the battery cells in the prototype packs had been 15A cells. Reimers also reiterated that Moli had more powerful cells. He stated that he had sent Milwaukee 25A cells (which Snap-On says Moli had previously designed), would send additional cells in December, and was working to finish development of 40A cells.

Plaintiffs disagree with Snap-On’s implicit contention that Moli had higher amperage cells in the works from the start. They posit that it was Milwaukee that had affirmatively asked about whether higher power cells were available. However, von Sacken averred that the 25A cells could be easily produced but were not provided initially as Moli could not at that time manufacture them on a large scale. After Milwaukee’s request, Moli assembled and provided 25A cells.

³By way of example, here is found one of the parties’ classic and frivolous attempts at disputing the facts. Plaintiffs respond to this fact with the word “DISPUTED,” assuming that suffices to raise a dispute as to whether Reimers’ email is authentic. (Docket #201 ¶ 86). It does not. Fed. R. Civ. P. 56(c)(1). The rest of the response says, “the assertions in Paragraph 86 are not supported by the cited material.” *Id.* But why not? It is not the Court’s task to read Reimer’s entire deposition, or some other document buried in the record, to find out what Plaintiffs mean. Fed. R. Civ. P. 56(c)(1)(B) (requiring party opposing a proffered fact to show “that the materials cited do not establish the absence or presence of a genuine dispute”). The parties’ experienced and able counsel know these elementary principles of summary judgment practice. Their choice to waste the Court’s time on such matters is concerning.

Milwaukee received the 25A cells from Moli by December 6, 2001. Project meeting minutes note that Moli had changed the chemistry for the 25A cell from the 15A cell. The improvements were Moli's idea, although Plaintiffs nevertheless maintain that the 25A cell was not assembled until they asked for it. *See* (Docket #213 ¶¶ 9–10).

In January and February of 2002, Moli made further changes to its cells, including an electrolyte change, which enabled it to create a 30A cell capable of performing better under a load. During this time, Moli projected that a 30A cell could be delivered in early March 2002. By mid-April 2002, Moli sent more than 20 battery packs equipped with Moli 30A cells to Milwaukee.

Milwaukee tested the 25A and 30A cells in April and May 2002. These tests included tests at various currents and under various conditions, but among the current levels were 20 amp tests. Milwaukee test data dated May 14, 2002 shows the 25A and 30A cells performing a 20A constant-current discharge test while maintaining capacity of 2.58 and 2.75 Ah, respectively, over the entire discharge. Other test data shows a pack of 25A cells was able to maintain a 2.90 Ah capacity over the entire discharge.

On May 2, 2002, Milwaukee employee Robert Disch ("Disch") calculated the 3A constant-current discharge capacity for the 25A-26650 cell as 2.61 Ah. He found the cell had a calculated capacity of 2.58 Ah in the 20A constant-current test. Disch also calculated the 3A constant-current discharge capacity for the 30A-26650 cell as 2.79 Ah. He found the same cell had a calculated capacity of 2.75 Ah when subjected to the 20A constant-current discharge. He sent his results to Meyer that day.

Zeiler updated the Milwaukee board of directors on the status of the Li-ion development project on June 26, 2002 through a PowerPoint

presentation. In this update, Zeiler reported that the 30A Li-ion battery packs were outperforming existing Milwaukee NiCd packs by over 40 percent, as shown in screwing, drilling, and cutting tests. The presentation further explained that when the 30A cells were placed under heavy continuous discharge—*e.g.*, 30–40 amp saw cutting—Milwaukee found that the temperature of the packs would sometimes rise to unsafe levels. To combat this, Reimers suggested adjusting the cell chemistry and electrode size by creating a longer, thinner electrode and improved electrolyte. The presentation also stated that one problem was that the “[c]ells need to change from 65mm length to 70mm to maintain 3.0Ah capacity.” (Docket #187-47 at 10).

On August 16, 2002, Moli sent 40A cells to Milwaukee, and August 22, 2002 meeting minutes indicate that battery packs with the 40A cells were to be sent on September 1, 2002. On September 18, 2002, Meyer sent an email to the project team reporting testing data for the 40A-R3 cells. Among several tests, one showed that the 40A-R3 cell could deliver 96% of its rated capacity when discharged at 20 amps and nearly 89% of its rated capacity when discharged at 30 amps. On October 1, 2002, Meyer emailed the project team reporting additional test data for the 40A-R2 cells, which showed the 40A-R2 cells were capable of delivering approximately 94% of their rated capacity when discharged at 20 amps. The next day, on October 2, 2002, Reimers emailed the project team confirming that Moli was attaining similar test results.

Plaintiffs state that conception of their invention occurred on or about November 21, 2002. Milwaukee’s contemporaneous documents shows a priority date for U.S. Application No. 10/721,800 (“the ‘800 Application”), the parent application for the subject patents, of November

22, 2002. Plaintiffs explain that the November 21 date was chosen because that was the day the inventors prepared an invention disclosure document.

Plaintiffs contend that they actually reduced to practice the invention no later than December 12, 2002. That day, there was a project meeting between Milwaukee and Moli. During the meeting, Reimers reported the preliminary testing results of the new, longer 40A-26700 cells. This testing showed these longer 40A cells delivered approximately 95% of their rated capacity when discharged at 20 amps. The data from these tests is reflected in the minutes for a January 9, 2003 project meeting. At that meeting, Moli reported that the longer 40A cells would be ready to be placed in battery packs by January 13, 2003. Moli also reported that it had sent three such cells to Meyer by the date of the meeting.

2. CLAIM CONSTRUCTION

Claim construction requires the Court to determine the meaning and scope of the disputed claim terms. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996). The interpretation of patent claims is a question of law for the Court. *Id.*

To construe a given claim, “the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) First in importance is the language of the claim itself as allowed by the examiner. *Bell Commc’ns Research, Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 619 (Fed. Cir. 1995).

The words of a claim are generally given their ordinary and customary meaning, which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Tethering construction to a person of ordinary skill in the art is critical, teaches the Federal Circuit, because such a person reads the words of the claims against the context of their meaning in the relevant field of study, including any special meanings or usages, and in light of closely related documents such as the specification and the prosecution history. *Id.* at 1313. Because of the sometimes specialized meanings attributed to terms based on the field in question, general-purpose dictionaries are not always useful. *See id.* Before resorting to such a resource, courts should begin with the materials that a person of skill in the art would use: “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*

After evaluating the claim language itself, the Federal Circuit instructs that the specification “is the single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at 1582. Although the patent specification may not be used to rewrite the claim language, *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004), the specification may be used to interpret what the patent holder meant by a word or phrase in the claim, *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988).

After considering the claim language and the specification, a court may consult the final piece of intrinsic evidence: the patent’s prosecution history. *Vitronics*, 90 F.3d at 1582. “[S]tatements made during the prosecution of a patent may affect the scope of the invention.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1343 (Fed. Cir. 2001). This is especially true if a particular interpretation of the claim was considered and specifically disclaimed during the prosecution of the patent. *Warner–Jenkinson Co., Inc.*

v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997); *Vitronics*, 90 F.3d at 1582–83.

Generally, the body of intrinsic evidence will eliminate any ambiguity in the claim terms, rendering unnecessary any reference to extrinsic evidence. *Vitronics*, 90 F.3d at 1583. Yet, if needed, a court may consider extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317–19. Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works, but it may not be used in derogation of the intrinsic evidence. *Id.*

2.1 The 20 Amp Limitation

The heart of the parties’ dispute in this case is the interpretation of the 20 Amp Limitation. This limitation reads: “the battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps.” The parties’ competing constructions are:

Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
“the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current or greater over the course of delivering their entire rated capacity”	This claim term is indefinite under 35 U.S.C. § 112, ¶ 2. In the alternative, “battery cells capable of producing an average battery pack discharge current greater than or equal to approximately 20 amps when used with a hand-held power tool over a time period consistent with the intended use of the tool.”

The parties' dispute, reduced to its essence, is quite straightforward: does this limitation require the battery pack to *continuously* produce 20 amps or greater of discharge current over its entire rated capacity, or must it merely be capable of producing an *average* discharge current of 20 amps or greater over its entire capacity?

The Court's interpretive task is somewhat eased, as it is not writing on a clean slate. Another branch of this Court, Magistrate Judge William Callahan, construed this very limitation contained in the same patents in 2012. *Milwaukee Elec. Tool Corp. v. Hitachi Koki Co., Ltd.*, No. 09-C-948, 2012 WL 10161527, at *3-4 (E.D. Wis. Dec. 11, 2012). Further, the Patent Trial and Appeal Board ("PTAB") construed this limitation during *inter partes* review (explained further below, *see infra* Part 3.2.2). (Docket #179-11 at 9-11); (Docket #179-12 at 7-8). Every adjudicative body that has assessed the 20 Amp Limitation has agreed with Plaintiffs' proposed construction. Although this Court is not bound by those prior decisions, *see Jackson Jordan, Inc. v. Plasser Am. Corp.*, 747 F.2d 1567, 1574 (Fed. Cir. 1984); *Memory Integrity, LLC v. Intel Corp.*, Case No. 3:15-cv-00262-SI, 2016 WL 1122718, at *19 (D. Or. Mar. 22, 2016), they are persuasive, and this Court reaches the same conclusion for largely the same reasons, *Markman*, 517 U.S. at 390-91 (1996) (observing that courts can achieve consistent claim construction "through the application of *stare decisis*"); *Key Pharm. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998); *Evolutionary Intelligence, LLC v. Sprint Nextel Corp.*, Case No. C-13-04513, 2014 WL 4802426, at *4 (N.D. Cal. Sept. 26, 2014) (noting that IPR proceedings constitute part of the prosecution history).

First, the language of the limitation is not limited to any particular application or tool, contrary to Snap-On's proposed construction. Nothing

in the claim language qualifies the limitation to discharge over a “non-trivial period of time,” as Snap-On proposes. *Hitachi*, 2012 WL 10161527, at *4. Thus, the import of such language is that a pack satisfying this limitation must be “capable of producing the required level of current at any point, in any operation, with any high current hand held power tool.” (Docket #178 at 11).

The specification, the next-best source of information for purposes of construction, corroborates this view. The patents-in-suit share a common specification: “the battery pack 30 can supply an average discharge current that is equal to or greater than approximately 20 A, and can have an ampere-hour capacity of approximately 3 A-h.” (Docket #187-1 at 76). The specification states that “the battery pack 30 can supply power to various power tools, such as, a driver drill 300, a circular saw 305, and the like.” *Id.* It can “power various power tools (including a driver drill 300 and a circular saw 305) having high discharge current rates.” *Id.* The specification states that the average discharge current associated with these exemplary uses should be 20 amps or greater. Thus, the specification contemplates many different applications and contexts for the battery pack in question, which is incongruent with Snap-On’s suggestion that some specified tool, under some specified time interval, be used as the sole benchmark.

As will be explained further below, because the skilled artisan would know that the constant-current test is the method for measuring conformity with the 20 Amp Limitation, Plaintiffs are not conjuring the phrases “reasonably close” and “entire rated capacity” from thin air, although Snap-On correctly notes that those terms are not found anywhere in the intrinsic record. Instead, Plaintiffs are simply reading the limitation in the way that it *must* be read; that is, with the standard explanation for how to

measure it. The constant current test, as mentioned above, involves discharging the pack at a constant current and measuring how long it can sustain that current.⁴

In addition to the claim language and specification, the prosecution history makes clear the distinction that Plaintiffs hope to draw between the Moli pack and theirs. The initial Moli prototype cells could discharge 20 amps in some applications, some of the time, but this was not enough. Indeed, it speaks volumes that the examiner, initially mistaking Moli's packs as Plaintiffs', rejected them. In so doing, the examiner stated: "Per one of the inventors, Gary Meyer, filed declaration under 37 CFR 1.132, it seems the claimed battery pack is incapable of delivery a useful average discharge current of 20 amps or greater." (Docket #209-63 at 4). The examiner also stated that because the prototype pack only had 5 lithium-ion cells instead of the claimed 7-cells pack, there was "no convincing evidence that more than 5 cells would make the power tool operates [sic] in a useful and safe manner." *Id.* Once the examiner's misapprehension was corrected, he allowed the claims to issue.

⁴More specifically, according to Plaintiffs, the test for determining whether a battery pack is capable of producing an average discharge current of 20 amps or greater is conducted as follows: (1) a pack is fully charged; (2) the pack is discharged at an estimated 1C rate based on the nominal capacity of the pack to establish rated capacity; (3) the pack is again fully charged; and (4) the pack is discharged at a constant current of 20 amps using an electronically controlled load. When a pack is able to deliver approximately the same capacity while being discharged at 20 amps as it does when discharged at a 1C rate, that demonstrates the pack's ability to provide 20 amps of discharge current over the course of delivering its full capacity. This is the test that their expert, Dr. Mark Ehsani ("Ehsani"), performed. (Docket #191-71 ¶¶ 6-7).

Snap-On asks the Court to engraft an additional limitation onto the 20 Amp Limitation out of practicality—that is, because tools in the field are not routinely turned on and their batteries run down completely without pause. *See* (Docket #201 ¶¶ 5, 12–13). Snap-On reasons that “the word ‘average’ in the 20 Amp Limitation implies that the discharge current may drop well below 20 amps so long as the average current remains above 20 amps.” (Docket #207 ¶ 127). According to Snap-On, it is unlikely that any power tool would have to deliver a constant current discharge reasonably close to 20 amps for its entire rated capacity in any real-life application. (Docket #201 ¶ 12).

But the standard of review is not what a person of skill in the art would find realistic; it is instead what a person of skill in the art would understand. There is no question that, putting aside matters of practicality, a person of ordinary skill in the art would comprehend the meaning of the 20 Amp Limitation, including the requirement that 20 amps be continuously delivered during the entire rated capacity of the battery pack. Such a person would understand that the limitation describes the capability, not the potential real-world use, of the invention. *See Hitachi*, 2012 WL 10161527, at *4 (“[T]he fact remains that the capacity of a battery is normally measured by discharging at a constant current until the battery has reached its terminal voltage, consistent with Metco’s construction.”). This is true notwithstanding the fact that even Plaintiffs concede that tool simulations are an important part of assessing the real-world functionality of the ultimate product.⁵

⁵Snap-On claims that Plaintiffs’ construction reads the word “average” out of the claim language, (Docket #205 at 13), but the Court does not agree. Plaintiffs’ construction incorporates the concept of “average” as meaning “reasonably close

Finally, the Court rejects Snap-On's suggestion that the 20 Amp Limitation is indefinite and therefore invalid. A patent must "conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the applicant regards as [the] invention" 35 U.S.C. § 112, ¶ 2 (emphasis added).⁶ If, when "read in light of the specification delineating the patent, and the prosecution history, [a patent claim] fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention," the claim is invalid as indefinite under Section 112. *Nautilus, Inc. v. Biosig Instrums., Inc.*, 134 S. Ct. 2120, 2124 (2014). A claim "must be precise enough to afford clear notice of what is claimed, thereby appris[ing] the public of what is still open to them." *Id.* at 2129; *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014). Moreover, a reviewing court must remember that "[i]t cannot be sufficient that a court can ascribe some meaning to a patent's claim; the definiteness inquiry trains on the understanding of a skilled artisan at the time of the patent application, not that of a court viewing matters *post hoc*." *Nautilus*, 134 S. Ct. at 2130.

to" the required discharge current. Snap-On rightly notes that there are other senses of the word "average," including averaging a discharge current over a specified interval, but Snap-On's belief that its interpretation of the word is the only reasonable one does not make it so. Moreover, the deposition testimony of the named inventors on this point cannot undermine the clarity of the intrinsic record, which supports Plaintiffs' interpretation. *See Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (finding that "extrinsic sources like expert testimony cannot overcome more persuasive intrinsic evidence").

⁶Paragraph 2 of 35 U.S.C. § 112 was replaced with Section 112(b) by Section 4(c) of the Leahy-Smith America Invents Act ("AIA"), and Section 4(e) makes that change applicable "to any patent application that is filed on or after" September 16, 2012. Pub. L. No. 112-29, § 4, 125 Stat. at 296-97. Because the applications resulting in the patents-in-suit were all filed before that date, the Court refers to the pre-AIA version of Section 112. *See Eli Lilly & Co. v. Teva Parenteral Meds., Inc.*, 845 F.3d 1357, 1370 n.8 (Fed. Cir. 2017).

A claim is indefinite where it can be measured in several ways and the claim language, considered against the specification and prosecution history, do not provide adequate guidance on which method to use. *See Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344–45 (Fed. Cir. 2015); *Eli Lilly*, 845 F.3d at 1370. Put differently, “the patent and prosecution history must disclose a single known approach or establish that, where multiple known approaches exist, a person having ordinary skill in the art would know which approach to select.” *Dow Chem. Co. v. Nova Chems. Corp.*, 803 F.3d 620, 634–35 (Fed. Cir. 2015).

However, “a patentee need not define his invention with mathematical precision.” *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005). Instead, “[t]he definiteness requirement mandates clarity, while recognizing that absolute precision is unattainable.” *Apple Inc. v. Samsung Elecs., Co.*, 786 F.3d 983, 1002–03 (Fed. Cir. 2015) (quotations and alterations omitted), *rev’d on other grounds* in 137 S. Ct. 429 (2016); *Nautilus*, 134 S. Ct. at 2128 (recognizing that “[s]ome modicum of uncertainty” may be tolerated). Indefiniteness is a question of law and must, like any other invalidity defense, be proven by clear and convincing evidence. *Sonix Tech. Co., Ltd. v. Publ’ns Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017); *Teva*, 789 F.3d at 1345.

Snap-On’s indefiniteness objection has two aspects. First, it says that Plaintiffs conveniently used functional language—the requirement for a 20-amp discharge current—just at the point of novelty from prior art, which is not permitted under *General Electric Co. v. Wabash Co.*, 304 U.S. 364, 371 (1938). However, the Federal Circuit has explained that functional language, standing alone, is not sufficient to render a claim indefinite. *Application of Swinehart*, 439 F.2d 210, 213 (C.C.P.A. 1971); *Cox Commc’ns*,

Inc. v. Sprint Commc'n Co. LP, 838 F.3d 1224, 1232 (Fed. Cir. 2016). Although neither expressly considered the matter, is it worth noting that neither Magistrate Callahan nor the PTAB had difficulty in construing the 20 Amp Limitation, much less such insurmountable difficulty as to render the limitation indefinite. Rather, the relevant materials provide a skilled artisan with sufficient information to describe the claimed subject matter and distinguish it from prior art, which is all that is required. See *Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008). Snap-On devotes little space to this argument and does no more than point out the functional language, expecting that effort to carry the day, and so the Court need not address the point further. See *Hardrick v. City of Bolingbrook*, 522 F.3d 758, 762 (7th Cir. 2008); *United States v. Berkowitz*, 927 F.2d 1376, 1384 (7th Cir. 1991).

The second aspect of the indefiniteness challenge is more involved. According to Snap-On, the 20 Amp Limitation is fraught with uncertainty as to how to test the “average discharge current” of the battery pack which a person of ordinary skill in the art could not unravel, including in relation to “how long the battery is used, the application or task for which the tool is used, the acceptable voltage performance, and even the ambient temperature.” (Docket #182 at 7). Put simply, Snap-On claims that a pack might not be able to produce a constant 20-amp discharge current over its entire rated capacity but could do so on average if used intermittently. (Docket #187-5 ¶ 32). In light of this, one of its experts, Yet-Ming Chiang (“Chiang”), opines that a pack must be tested in various ways that simulate real-world applications. *Id.* ¶ 34. This makes Meyer’s 2001 cutting test and pulse test at least as relevant—indeed more so—that the constant-current test he performed. *Id.* ¶ 39; see also (Docket #187-13 163:6–23) (Reimers

testifying that average discharge current denotes averaging the discharge produced during pulse or profile tests). On this point, Snap-On asserts that Magistrate Callahan failed to consider the issue of indefiniteness as reinvented by the Supreme Court in *Nautilus*, rendering his opinion less persuasive. *See Dow*, 803 F.3d at 630 (“[T]here can be no serious question that *Nautilus* changed the law of indefiniteness.”).

Plaintiffs admit that tool simulation profiles are among the tests used to assess the performance of Li-ion battery packs. (Docket #201 ¶¶ 14–15). Moreover, other witnesses, include two of the named inventors, testified that a battery pack could be run both intermittently and constantly to ascertain an average discharge current. *See id.* ¶¶ 24–26. Because of the diversity of potential testing conditions and applications, Chiang concludes that skilled artisans could reasonably differ in how they assess whether the 20 Amp Limitation is met and that the patents-in-suit, even when considered alongside the specification and prosecution history, do not provide adequate instruction on which test should be used. (Docket #187-5 ¶¶ 45–47); *see also* (Docket #187-10 47:19–48:18) (testimony of Plaintiffs’ expert during IPR, opining that continuously running a power tool until its battery runs out is not a “typical” way such tools are operated).

The Court does not agree. The Federal Circuit has found indefinite patent claims that do not teach how they are to be measured. For instance, in *Teva*, a patent claim prescribed a particular “molecular weight” of a product but did not specify which of three methods should be used to measure it. *Teva*, 789 F.3d at 1345. Neither the claims nor the specification provided guidance, and the prosecution history contained inconsistent statements by the patentee about which measure was correct. *Id.* at 1344–45.

Likewise, in *Dow*, the court considered a claim that required calculation of the “slope of strain hardening coefficient.” *Dow*, 803 F.3d at 631. The claim did not specify at which of several possible ways the “slope” should be calculated. *Id.* at 632–33. The Court of Appeals found that a skilled artisan would not be able to choose among them even after review of the specification and prosecution history, and so the claim was indefinite. *Id.* at 634. In so doing, it rejected the testimony of the plaintiff’s expert that an artisan would know to select his method, since the expert’s method “was not even an established method but rather one developed for this particular case.” *Id.* at 635.

The situation here is different. As explained above, the claim language, considered alongside the specification and prosecution history, all indicate that the 20-amp discharge current must be constant throughout the rated capacity of the battery, regardless of application. This is determined by application of the constant-current discharge test, which the evidence submitted by Plaintiffs establishes as an industry-standard test. It is not, as was the case in *Dow*, an *ad hoc* test among other defensible methods of measurement.

Plaintiffs offer a robust body of testimony to support the proposition that the constant-current test is the proper way to measure the 20 Amp Limitation. First, their expert, Ehsani, opined that a skilled artisan would understand that the 20 Amp Limitation referred to the capability of a battery pack under constant current discharge, not during a real-world application. (Docket #191-71 ¶ 23).

Next is Zeiler, who testified that the constant current discharge was “the industry standard and the de facto measuring stick we used to determine whether a cell at that time. . .was capable of performing in a real

world application.” (Docket #179-27 53:17–22). He explained that the “20 amp constant current discharge at the time was the test that was the bare minimum a cell needed to do to be able to build the confidence for any technical team to understand whether or not it could actually work in the field.” *Id.* 53:25–54:4; *see also id.* 57:19–22 (to be successful, the cell at a “minimum had to be able to deliver a 20 amp constant current discharge”). Zeiler testified that 20 amps represented the low end of operational power for a power tool, while the high end was somewhere around 80 amps. (Docket #172 ¶ 128).

Similarly, Meyer claimed that he performed constant current discharge testing on the Moli packs in 2001 because such tests “were and are commonly used by power tool manufacturers to assess the suitability of a battery product for powering a tool.” (Docket #179-29 ¶ 6). Snap-On notes that Meyer admitted that a battery pack can be tested by other methods, including averaging the discharge current over a given time interval, but Meyer also opined that he would “normally” use a constant-current test. (Docket #187-14 159:3–160:19); *see also* (Docket #203-62 at 5) (from Handbook of Batteries, author David Linden notes that the constant-current discharge test “is becoming more popular for battery-powered applications”). Indeed, even von Sacken, Moli’s former employee, testified that the constant-current test was “a very typical way of testing cells” because it made it “easy to measure capacity[.]” (Docket #203-49 65:18–66:25).

Likewise, Selby testified that although the constant current test was one of “multiple ways” to test a battery pack, it was the “most typical” or “primary” test, and was used to cement “a basic first understanding or check of the battery pack’s capability.” (Docket #179-32 32:9–33:4; *id.* 63:5–

64:7 (noting that the constant current test was “a standard criteria” in the industry); (Docket #179-34 ¶ 5) (averring that the constant current test was “a normal test procedure used by Milwaukee Tool”). Importantly, he opined that Meyer’s other 2001 testing, such as the cutting test, was not a suitable method to determine whether the 20 Amp Limitation was met, as it was “not a controlled or any kind of scientific-type test.” (Docket #179-32 34:10–35:8).

Snap-On points out that Meyer did not offer in his 2009 declaration about his 2001 testing an explanation of how the 20 Amp Limitation should be tested. Plaintiffs read Meyer’s declaration to show that failure on the constant-current discharge test was sufficient to render the prototypes inadequate, while Snap-On asserts that the results of the other tests, including the cutting test, were indispensable to that ultimate conclusion. (Docket #201 ¶ 31). In Plaintiffs’ view, the other tests merely assessed “certain characteristics” of the prototype packs but were not necessary to Meyer’s conclusion that the packs did not meet Plaintiffs’ discharge current requirements. *Id.*

Snap-On places much emphasis on Meyer’s decision to run other tests on the Moli prototypes in 2001, but it fails to provide persuasive evidence that those other tests, including the cutting and pulse tests, were industry-standard tests. Meyer’s choice to assess several characteristics of the prototypes notwithstanding their failure on the crucial constant-current discharge test is unsurprising; he is an inventor, and it behooved him to explore every limit of the prototypes to see how they might be improved.

Those efforts do not mean that every test he employed was necessary to his conclusion that the packs failed to meet the 20-amp discharge requirement.⁷

For these reasons, Snap-On's concerns with how long the battery is used or its specific application are unavailing. Moreover, it is noteworthy that the PTAB, reviewing Snap-On's identical charge of indefiniteness under *Nautilus* during *inter partes* review, came to the same conclusion. (Docket #179-11 at 10–11) (finding that “one of ordinary skill in the art would understand that the battery cells are capable of producing an average discharge current greater than or equal to approximately 20 amps *under any set of reasonable operating conditions*”) (emphasis added). The 20 Amp Limitation, though admittedly broad, is not indefinite simply because it is broad. *Id.* (citing *In re Miller*, 441 F.2d 689, 693 (C.C.P.A. 1971)). And it must be remembered that Snap-On is required to establish indefiniteness by clear and convincing evidence. *Sonix*, 844 F.3d at 1377. Even were the Court to find Snap-On's evidence more persuasive than Magistrate

⁷Interestingly, Snap-On seems to believe that Meyer's 2009 declaration regarding his 2001 testing of the Moli prototypes is reliable inasmuch as it establishes that there was no accepted test for the 20 Amp Limitation, but that it is unreliable to the extent it is used to show that the constant-current discharge test is the appropriate standard. *See* (Docket #182 at 9 & n.2). The Court does not buy in to this kind of cherry-picking, but even if it did, Snap-On is simply incorrect that Meyer's view of the correct test is “uncorroborated,” as Plaintiffs have proffered other testimony and documentary evidence to substantiate Meyer's position. Thus, the Court in this instance does not share the sort of worry expressed by the Federal Circuit in *Akamai*, cited by Snap-On, where the plaintiff tried to leverage the subjective beliefs of a single inventor to define a claim term. *See Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1194 (Fed. Cir. 2003). The presence of corroborating evidence in this case assuages any concern that Meyer's statements are self-serving, particularly because the statements came long after the patent applications. *See Phillips*, 415 F.3d at 1313 (noting that claim terms are defined with reference to “the effective filing date of the patent application”); *Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350 (Fed. Cir. 2001) (describing need for corroborating evidence supporting an inventor's testimony).

Callahan or the PTAB did, it is still not as strong as it needs to be to support a finding of indefiniteness.

What remains are Snap-On's attempts to inject uncertainty into the claim where little exists, such as with respect to "the acceptable voltage performance" or "the ambient temperature." The Federal Circuit has rebuffed similar attempts to manufacture indefiniteness from the failure to prescribe the precise parameters of testing functional limitations. *Koninklijke Philips N.V. v. Zoll Med. Corp.*, 656 F. App'x 504, 526 (Fed. Cir. 2016) (finding that lack of "absolute precision" on how to test functional aspect of a claim did not prove indefiniteness by clear and convincing evidence). Indeed, the PTAB recognized Snap-On's proposed construction for what it is—an effort to create uncertainty. (Docket #179-11 at 11) ("Petitioner recognizes that its proposed construction 'leaves uncertain whether a given battery pack, depending on the particular tool and application for which it is used, satisfies the 20 Amp Limitation.'"). Thus, the Court concludes that whatever minor testing parameters may be left undefined in the claim do not show that the term is indefinite. *See VERVE, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1119 (Fed. Cir. 2002) ("[T]he patentee is not required to include in the specification information readily understood by practitioners, lest every patent be required to be written as a comprehensive tutorial and treatise for the generalist, instead of a concise statement for persons in the field.").

For the reasons stated above, the Court adopts Plaintiffs' proposed construction of the 20 Amp Limitation.

2.2 "Nominal Voltage"

The parties also dispute the construction of the term "nominal voltage," which is recited in Claims 5, 7 and 11 of the '290 Patent, claims 5,

7, and 11 of the '173 Patent, and claims 1, 5, 9, 10, 12, 14–16, and 18 of the '510 Patent. The parties' competing proposals are:

Plaintiffs' Proposed Construction	Defendant's Proposed Construction
"designated approximate voltage"	This claim term is indefinite under 35 U.S.C. § 112, ¶ 2.

This dispute is far easier to resolve than that concerning the 20 Amp Limitation. As in that circumstance, here Snap-On alleges that "nominal voltage," which is not defined anywhere in the intrinsic record,⁸ is indefinite. Like "average discharge current," Snap-On believes that the record does not supply the proper method of measuring what voltage is considered "nominal." Plaintiffs counter that the term means the "designated approximate voltage." They emphasize that the "nominal" voltage is simply the denominated voltage, not the actual voltage as obtained by any sort of measurement.

In Snap-On's view, nominal voltage can mean several things, including the voltage at the starting, midpoint, or some other point in the life of the battery cell. Its expert, Chiang, opines that the term "nominal voltage," without a clarification as to the point of measurement, is not capable of definition. *See* (Docket #187-5 ¶¶ 50–51). Additionally, one of the named inventors, Jay Rosenbecker ("Rosenbecker"), testified that at the time the patent was drafted, there "wasn't a lot of agreement in the industry I believe on what nominal voltage meant." (Docket #187-10 192:4–22). To his mind, it depends on what reference voltage one obtains, which might

⁸The specification refers to battery cells with nominal voltages of 3.6V, 4V, and 4.2V. (Docket #187-1 at 77).

depend on the load applied. *Id.* For example, one could measure the open-circuit voltage, which is the voltage reading when no tool is connected to the battery, or the closed-circuit voltage, which includes some defined load being supplied by the battery to a tool. (Docket #201 ¶ 61). Snap-On notes that in an internal presentation in 2007, Meyer and a colleague stated that a 28V battery pack was designated as such by multiplying the number of cells, 7, by the voltage of each cell, 4V. They considered, however, the possibility that the pack could be rated based on a measurement of the average voltage, which would result in a pack voltage of 26.6V.

Similarly, says Snap-On, Meyer testified that a battery's nominal voltage depends on how charged the battery is. *Id.* ¶ 62. But his actual testimony was in response to counsel's questioning about whether there exists a difference between "nominal voltage" and "nominal charged voltage." (Docket #187-14 109:7–110:3). It is not at all clear that he believes that "nominal voltage" *per se* is a measured value. This is Plaintiffs' view: that "nominal voltage is not measured," it is merely designated, so there can be no problem arising from how to measure it. (Docket #201 ¶ 62); (Docket #178 at 16) ("nominal voltage" is "not a measured voltage at all").

As before, Magistrate Callahan and the PTAB agreed with Plaintiffs' construction of this term. Snap-On points out, however, that as a technical matter, the magistrate construed the term "nominal voltage range," not "nominal voltage." *See Hitachi*, 2012 WL 10161527, at *7–8. Nevertheless, the Court finds that the close similarity of the terms begets a similar treatment. *See* (Docket #179-13 at 14) (PTAB ruling finding Judge Callahan's construction "informative"). More to the point, the PTAB found that "[i]n general, 'nominal' is a term used in technological fields to indicate a stated value is only an approximate, rather than exact value." *Id.* Moreover,

Plaintiffs’ and the PTAB’s views comport with the ordinary meanings of the word “nominal,” as the dictionaries cited by the parties are in agreement that a “nominal” value need not correspond to any actual or observed value. (Docket #201 ¶ 55). For instance, Oxford says that for manufactured articles, “nominal” as used in connection with an aspect of the article means the value “stated or expressed but not necessarily corresponding to the real value.” *See id.* Likewise, the Dictionary of Engineering states that a “nominal voltage” is the “rated or named” voltage but that “the actual values, or interval of values, may not coincide with” the nominal voltage. *See id.* The Court is confident that this is how a skilled artisan would read the term, and so it will adopt Plaintiffs’ construction.

2.3 “A Plurality of Cells Supported by the Housing”

The final term for construction is “a plurality of cells supported by the housing,” a term appearing in claim 1 of the ‘290 Patent and ‘173 Patent, as well as claims 1, 9, 10, 12, 16, and 18 of the ‘510 Patent. The parties’ dispute focuses on the meaning of the word “supported,” and their constructions are:

Plaintiffs’ Proposed Construction	Defendant’s Proposed Construction
“the weight of which is borne either directly or indirectly by the housing”	“a plurality of cells engaged, and held in position, by the housing”

The parties agree that the word “supported” as used here has no specialized meaning. The Court can, therefore, resort to “the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. Magistrate Callahan did the same in his 2009 claim construction order, noting that the key aspect of the meaning of the word “support” is that of

bearing, directly or indirectly, the weight of the thing being supported. *See Hitachi*, 2012 WL 10161527, at *5. Magistrate Callahan built his construction on prior cases in which the word “support” was construed and using applicable dictionary definitions. *Id.*⁹

These sources show that the word has a plain, ordinary, and rather broad meaning. Snap-On’s proposed construction narrows the reach of the word “support” to require the structure to hold the “supported” thing in place, but they do not cite sufficiently clear authority limiting Plaintiffs to this narrower sense of the word. *See Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1282 (Fed. Cir. 2017) (“[A]bsent a clear disavowal or alternative lexicography by a patentee, he or she ‘is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning.’”) (quoting *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012)). To be sure, Snap-On may be right that for sensitive circuitry, it is important not only to hold something up against the force of gravity but also secure it in a single position. (Docket #182 at 17). But in light of the ordinary and far broader meaning of the word “support,” Snap-On comes up short on persuasion. As was the case in *Wasica*, here Plaintiffs are entitled to claim the full sense of the term since there is nothing in the intrinsic record showing a disavowal of that interpretation. *Wasica*, 853 F.3d at 1282.

Snap-On’s argument arising from the patent specification does not alter this result. Snap-on contends that while one embodiment described in

⁹Webster’s defines “support” as “[t]o maintain in position so as to keep from falling, sinking, or slipping.” (Docket #201 ¶ 64). It also defines the word as “to bear the weight of.” *Id.* Similarly, Oxford defines “support” as “bear all or part of the weight of; hold up.” *Id.*

the specification depicts a battery pack supported by the housing itself, another depicts the pack supported by end caps within the overall housing. (Docket #182 at 19–20); (Docket #187-1 at 30, 60) (figures depicting each embodiment). But the problem here is that although Snap-On’s reading of the specification and figures is that the end caps are doing the supporting, there are no words they can point to in the document to that effect. Certainly the specification demonstrates an awareness that there are end-caps present in one embodiment but not the other. However, nowhere does the specification say that it is the end-caps doing the work of supporting the cells. The Court, reading the specification language alongside the figures, sees the end caps as simply part of the overall housing, which in turn supports the cells. While Snap-On’s gloss on the specification may not be unreasonable, the Court needs a “compelling reason,” not simply a reasonable one, to depart from the usual practice of interpreting claim terms so as to avoid excluding any of the embodiments. *Wasica*, 853 F.3d at 1282. Thus, Snap-On’s arguments are unavailing, and the Court will adopt Plaintiffs’ construction.

3. SUMMARY JUDGMENT

Now that the Court has construed the disputed claim terms, it can turn to the parties’ motions for summary judgment. Federal Rule of Civil Procedure 56 provides that the court “shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); *Boss v. Castro*, 816 F.3d 910, 916 (7th Cir. 2016). A fact is “material” if it “might affect the outcome of the suit” under the applicable substantive law. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A dispute of fact is “genuine” if “the evidence is such that a reasonable jury could return a

verdict for the nonmoving party.” *Id.* The court construes all facts and reasonable inferences in the light most favorable to the non-movant. *Bridge v. New Holland Logansport, Inc.*, 815 F.3d 356, 360 (7th Cir. 2016). The court must not weigh the evidence presented or determine credibility of witnesses; the Seventh Circuit instructs that “we leave those tasks to factfinders.” *Berry v. Chicago Transit Auth.*, 618 F.3d 688, 691 (7th Cir. 2010). The party opposing summary judgment “need not match the movant witness for witness, nor persuade the court that [its] case is convincing, [it] need only come forward with appropriate evidence demonstrating that there is a pending dispute of material fact.” *Waldridge v. Am. Hoechst Corp.*, 24 F.3d 918, 921 (7th Cir. 1994).

The parties have raised a host of disparate issues for the Court to consider. To create a more focused narrative, the Court will address these matters slightly out of order.

3.1 Defendant’s Motion¹⁰

3.1.1 Derivation

Snap-On first attacks the patents-in-suit as invalid under 35 U.S.C. § 102(f), which says that a person is not eligible for a patent if “he did not himself invent the subject matter sought to be patented.” 35 U.S.C. § 102(f) (2006). This is called “derivation,” because Section 102(f) reflects the principle that one who derives an invention from another cannot patent it. *Price v. Symsek*, 988 F.2d 1187, 1190 (Fed. Cir. 1993). The AIA did away with Section 102(f), but only for patent applications filed after March 16, 2013;

¹⁰In its motion, Snap-On incorporates by reference its argument from its claim construction briefing that the patents are invalid for indefiniteness. (Docket #184 at 20). The Court has considered and rejected that argument, as explained above. The analysis need not be repeated here.

applications filed before that date remain governed by the pre-AIA version of Section 102. Here, the battery-pack patents were all filed prior to March 16, 2013, so the former Section 102(f) still applies.

In order to establish derivation, Snap-On must prove, by clear and convincing evidence, “both prior conception of the invention by another and communication of that conception to the patentee.” *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1334 (Fed. Cir. 2003); *Cumberland Pharm. Inc. v. Mylan Institutional LLC*, 846 F.3d 1213, 1218 (Fed. Cir. 2017). Communication requires a sharing of the complete conception, sufficient to enable one of ordinary skill in the art to construct and successfully operate the invention. *Hedgewick v. Akers*, 497 F.2d 905, 908 (C.C.P.A. 1974). “All the circumstances in the record must be considered in evaluating the sufficiency of the communication.” *Id.*

“Conception is the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention, as it is therefore to be applied in practice.” *Singh v. Brake*, 317 F.3d 1334, 1340 (Fed. Cir. 2003). An idea is sufficiently definite for conception “when the inventor has a specific, settled idea, a particular solution to the problem at hand, not just a general goal or research plan he hopes to pursue.” *Burroughs Wellcome Co. v. Barr Labs.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994). A conception must encompass all limitations of the claimed invention, *Singh*, 217 F.3d at 1340, and “is complete only when the idea is so clearly defined in the inventor’s mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation,” *Burroughs Wellcome Co.*, 40 F.3d at 1228. Indeed, “derivation is not proved by showing conception and communication of an idea different from the claimed invention even where that idea would make the claimed idea obvious.”

Cumberland Pharm., 846 F.3d at 1219. Furthermore, “conception is not complete if the subsequent course of experimentation, especially experimental failures, reveals uncertainty that so undermines the specificity of the inventor’s idea that it is not yet a definite and permanent reflection of the complete invention as it will be used in practice.” *Burroughs Wellcome Co.*, 40 F.3d at 1229.

When a party seeks to prove conception via the testimony of a putative inventor, the party must proffer evidence corroborating that testimony. *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996); *Price*, 988 F.2d at 1194. Otherwise, that person “might be tempted to describe his actions in an unjustifiably self-serving manner in order to obtain a patent or to maintain an existing patent.” *Singh*, 317 F.3d at 1340. Yet there is no particular form that the corroboration must take; rather, whether a putative inventor’s testimony has been sufficiently corroborated is determined by a “rule of reason” analysis, in which “an evaluation of all pertinent evidence must be made so that a sound determination of the credibility of the inventor’s story may be reached.” *Price*, 988 F.2d at 1195.

Snap-On claims that Plaintiffs derived the present invention from Moli, which had conceived of it and communicated it to Plaintiffs. This is so, says Snap-On, even if one finds that Plaintiffs have the proper construction of the 20 Amp Limitation. The Court has so construed the 20 Amp Limitation, so it proceeds from that starting point.

The argument here rests on both Moli’s initial sales pitch regarding Li-ion batteries and its work with Milwaukee to thereafter improve the cells to a point acceptable to Milwaukee. First, according to Snap-On, it was Moli that first approached Milwaukee with the idea of substituting Li-ion battery cells for the existing NiCd battery cells in high-power cordless tools. As

demonstrated in the Bosch 24V Power Presentation, Moli retrofitted a standard NiCd battery pack with Li-ion batteries, hooked it up to a tool and used it to cut wood and metal. Moli also described the cells and their benefits for cordless tools, and then provided Milwaukee with a working prototype of a Li-ion battery pack so that Milwaukee could test it.

Though Moli initially provided a prototype pack with 15A cells, it told Milwaukee it had higher powered cells and quickly provided them. All through the development process, Moli identified and worked on changes to cell chemistry and structure to improve power and reliability. For instance, in an internal email to Milwaukee corporate counsel, Rosenbecker stated that he did not know the “exact chemistry of the packs” and that “[t]his is probably proprietary information on Moli’s end.” (Docket #209-42 at 2). Milwaukee even told the Patent Office that it did not invent a Li-ion battery cell. It touted instead that “[t]he solution developed by Milwaukee was not based on a revolutionary battery cell but on its expertise in making battery packs for power tools.” (Docket #187-59 at 12).

According to Snap-On, Moli not only provided cells, but it provided Li-ion battery packs with the Li-ion cells already installed. These included cells designated 25A, 30A, and finally 40A. As demonstrated by Milwaukee’s own test data, the Li-ion cells provided by Moli in sample battery packs to Milwaukee throughout 2001 delivered between 94% and 97% of their rated capacities when discharged with a laboratory load at a constant current of 20 amps. Snap-On believes that this constitutes meeting the 20 Amp Limitation as construed by Plaintiffs. Thus, in Snap-On’s view, it was Moli, not Milwaukee, that conceived of this series of Li-ion cells that met the 20 Amp Limitation, and Moli did so well in advance of Milwaukee’s claimed conception date of November 21, 2002.

Plaintiffs' response focuses on both who conceived of the invention and the completeness of the conceptions communicated to it by Moli. First, Plaintiffs firmly believe that it was they who conceived of, and demanded production of, a battery cell that actually fulfilled the 20 Amp Limitation. Moli, as a battery cell manufacturer, simply supplied battery cells that Milwaukee requested and assembled the packs to the specifications Milwaukee set.

Second, contend Plaintiffs, the improved cells developed during the joint Milwaukee-Moli project, while admittedly better than the initial 15A cells provided to Meyer in September 2001, were still not strictly compliant with the high bar set by the 20 Amp Limitation—that is, a discharge of reasonably close to 20 amps over the battery pack's entire rated capacity. Not until the 40A cells came into being do Plaintiffs contend that the invention was reduced to practice. Moreover, say Plaintiffs, the higher-power cells, whatever their capabilities, did not disclose the complete invention, for they were only cells and not completed battery packs, as the patents-in-suit describe. Finally, Plaintiffs assert that Moli at most developed the battery cells themselves, not the packs which are an indispensable part of the complete invention.

The Court finds Plaintiffs' position to be a more accurate reflection of the record evidence. *See Price*, 988 F.2d at 1190 (“While the ultimate question of whether a patentee derived an invention from another is one of fact, the determination of whether there was a prior conception is a question of law, which is based upon subsidiary factual findings.”) (internal citations omitted). Moli's initial 15A cell, while promising, fell well short of the 20 Amp Limitation. So too did the next cell, the 25A, for which the discharge

current of 20 amps could not be maintained for reasonably close to the entire rated capacity of the pack.

Moreover, even if one or more of the later-developed cells were sufficient to meet the 20 Amp Limitation, the tests on which Snap-on relies were largely conducted on single cells, not whole packs, and those tests were conducted in May 2002, well after Milwaukee's direction to Moli to create a higher power battery pack. Snap-On's implicit contention that it was easy to extrapolate single cells into a pack is not one the Court can agree with, since derivation is not proved by merely rendering the final conception obvious. *Cumberland Pharm.*, 846 F.3d at 1219.

More importantly, these later cells were conceived by Milwaukee and assembled by Moli. To the extent the project was a joint venture, with both Moli and Milwaukee contributing some advances or improvements over time, it cannot be said that Moli conceived of the final invention first (or at all, for that matter). As it stands, the record shows that "Moli was a supplier of a component part of the invention working at the direction of the true inventors—Milwaukee." (Docket #200 at 17). In such instances, the Federal Circuit provides that "[a]n inventor 'may use the services, ideas, and aid of others in the process of perfecting his invention without losing his right to a patent.'" *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 624 (Fed. Cir. 1985) (quoting *Hobbs v. United States Atomic Energy Comm'n*, 451 F.2d 849, 864 (5th Cir. 1971)).

It is untrue, as Snap-On contends, that Milwaukee simply waited around for Moli to supply progressively more powerful cells. (Docket #216 at 7). Indeed, the contemporaneous record reflects that, at worst for Milwaukee, the parties at the time conceived of their work as joint inventorship, as reflected in their joint ownership of the invention under

their 2003 agreement—discussed further below, *see infra* Part 3.2.1—prior to Moli’s 2006 assignment of its rights to Milwaukee. And it is undisputed that Moli contributed only the battery cells and appeared to have little or no involvement in the design or manufacture of the packs’ housing. The facts of this case do not sustain a claim that Moli was the sole and prior inventor here. *See Hess v. Advanced Cardiovascular Sys., Inc.*, 103 F.3d 976, 981 (Fed. Cir. 1997) (“[W]hether particular suggestions and contributions of third persons amount to co-inventorship turns on the facts of the particular case.”). On the whole, the circumstances surrounding Moli and Milwaukee’s interactions reflect a course of experimental failures on the way to success. *Burroughs Wellcome Co.*, 40 F.3d at 1229. They do not establish that Moli conveyed a definite and firm idea of the completed, operable invention. *Id.*; *Singh*, 317 F.3d at 1340. Accordingly, Moli did not conceive of the invention before Milwaukee, and Snap-On’s derivation defense therefore fails.

3.1.2 Marking and Pre-Suit Damages

Next, Snap-On challenges Plaintiffs’ claim that they are entitled to pre-suit damages for the ‘290 Patent under 35 U.S.C. § 287(a).¹¹ To get this category of damages, the statute requires that Plaintiffs give actual notice of their patents to alleged infringers, or provide them constructive notice by marking their products with the applicable patent numbers. *Id.* “The purpose of the constructive notice provision is to give patentees the proper incentive to mark their products and thus place the world on notice of the

¹¹The parties agree that neither Plaintiffs’ nor their licensees’ products embodying the ‘173 and ‘510 Patents have been marked with the pertinent patent numbers. Accordingly, Plaintiffs contend they seek pre-suit damages only for infringement of the ‘290 Patent.

existence of the patent.” *Am. Med. Sys., Inc. v. Med. Eng’g Corp.*, 6 F.3d 1523, 1537 (Fed. Cir. 1993). Thus, the statute defines that “[a patentee] is entitled to damages from the time when it either began marking its product in compliance with [S]ection 287(a)[, constructive notice,] or when it actually notified [the accused infringer] of its infringement, whichever was earlier.” *Id.* Plaintiffs do not contend that Snap-on received actual notice prior to this lawsuit, (Docket #200 at 25 n.12), so the Court need only determine whether they had constructive notice.

The Federal Circuit requires that “once marking has begun, it must be substantially consistent and continuous in order for the party to avail itself of the constructive notice provisions of [Section 287(a)].” *Id.* Plaintiffs have the burden of pleading and proving, by a preponderance of the evidence, that they complied with the statutory requirements. *See Nike Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1446 (Fed. Cir. 1998); *Motorola, Inc. v. United States*, 729 F.2d 765, 770 (Fed. Cir. 1984). Compliance with Section 287(a) is a question of fact. *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1111 (Fed. Cir. 1996).

The marking requirement applies to both Plaintiffs and their licensees or other authorized users. *Amsted Indus. Inc. v. Buckeye Steel Castings Co.*, 24 F.3d 178, 185 (Fed. Cir. 1994). However, “with third parties unrelated to the patentee, it is often more difficult for a patentee to ensure compliance with the marking provisions.” *Maxwell*, 86 F.3d at 1111. Thus, the Court of Appeals applies a “rule of reason” approach and holds that “substantial compliance may be found to satisfy the statute.” *Id.* As a result, the mere number of products sold without proper marking, standing alone, is not conclusive of whether the marking can be considered “substantially consistent and continuous.” *Id.* Rather, when the failure to mark is caused

by someone other than the patentee, the court may consider whether the patentee made reasonable efforts to ensure compliance with the marking requirements. *Id.*

Generally, evidence of overarching policies or practices with regard to marking, or monitoring licensees' marking, will not do. *See Von Holdt v. A-1 Tool Corp.*, 714 F. Supp. 2d 863, 871 (N.D. Ill. 2010). There is no strict requirement that testimony about practices be backed up by documentary evidence, however. *See Nike*, 138 F.3d at 1447. The inquiry is flexible, and the court need only be presented with evidence sufficient to convince a reasonable jury that compliance with the statute was achieved. *Von Holdt*, 714 F. Supp. 2d at 871.

With these principles in mind, the Court turns to Plaintiffs' marking efforts in this case. The '290 Patent was issued in June 2009 and is set to expire in November 2023. Plaintiffs granted licenses to five competitors prior to the filing of this suit. (Any post-filing licenses would, of course, have no bearing on constructive notice, since at that time actual notice would have been achieved.) The licenses included provisions requiring the licensees to mark the relevant products, though the specified marking period varied from license to license.

In an affidavit, Milwaukee's counsel, Elizabeth Miller ("Miller"), explained the company's efforts to monitor licensee marking. (Docket #61-44). She avers that "specific unit sales data is not available for the various licensees which makes it impossible to provide an exact calculation of marking compliance by a percentage of units." *Id.* at 4. Miller instead provides a chart which sets forth each licensee's "Compliance in percent of potential marking months." *Id.* at 6.

The chart reflects that three of the pre-suit licensees had agreements to mark which cover the entire period of their licenses, at least until the date of filing the present suit. (Docket #61-44 at 6). For two of them, however, the required marking periods expired in September 2013, around thirteen months before this action was filed. *Id.* Another licensee's marking period was only four years, though in that instance the fourth year fell after the filing of this lawsuit. *Id.* In total, assuming that the marking agreement was actually and consistently followed (something Snap-On disputes), marking compliance for Plaintiffs and their licensees was about 89%. *Id.*

Of course, as the Court previously observed, "Miller never describes how and when products were marked, only that licensees were supposed to be marking." *Milwaukee Elec. Tool Corp. v. Chervon N. Am. Inc.*, Case No. 14-CV-1289-JPS, 2017 WL 2445845, at *6 (E.D. Wis. June 6, 2017). Instead, she simply avers in a general fashion that "Plaintiffs [] followed up with their licensees and monitored their products to ensure compliance with their marking obligations." (Docket #61-44 at 6). David Selby testified to this end, too, stating that he recalled doing "some auditing and checking of competitors to make sure that they were following through." (Docket #203-68 110:17-111:5). He did not have any more specific recollection than that. *See id.* Consistent with Miller and Selby, Plaintiffs' corporate representative could provide no specific detail about monitoring efforts, and only testified that he was told that the "legal department was monitoring the market." (Docket #218-22 198: 20-199:2).

Snap-On asserts that Plaintiffs' evidence would not enable a reasonable jury to find compliance with the statute. Snap-On contends first that although Plaintiffs had agreements requiring marking, they made little effort to actually monitor marking and ensure compliance. For instance, to

support their compliance efforts, Plaintiffs proffer an email string from 2012, in which Miller contacted one licensee to inquire after its marking efforts. (Docket #203-93). However, the string of emails do not shed light on the licensee's actual marking efforts. *Id.* In another email with another licensee, while marking is discussed, there is nothing said about whether it is occurring; rather, the communication is about the terms of the marking provision itself as part of prospective license negotiation. (Docket #203-95). However, it is worth noting that another Milwaukee licensee avers that it has used its best efforts to comply with its marking obligations. (Docket #203-70 at 6). Snap-On says that no actual evidence of marking by this licensee during the relevant period has been produced, but it does not have evidence to show that the affiant is being untruthful or lacks knowledge of the matter.

Second, Snap-On asserts that the gaps in marking periods create an inference that marking was not done during those periods. This includes the two licensees whose marking obligations expired over a year before this action was filed.¹² For one of them, Snap-On has evidence that an unmarked product was available for sale in June 2013. (Docket #217 ¶ 80). Moreover, though Plaintiff proffers photos of some marked products, Snap-On points out that there is no evidence that any marking was actually done during the relevant pre-suit period. To be fair, one of the photos obviously dates from 2013. (Docket #202-7). The others, however, are either undated or post-date the filing of this lawsuit. *See, e.g.*, (Docket #202-1, #203-79, #203-80).

¹²Snap-On also seems to assert that the licensee whose marking obligations expired after four years, but still post-filing, does not satisfy the "continuous" aspect of marking. (Docket #217 ¶ 75). The Court does not agree, as any need to put Snap-On on constructive notice expired on the date this suit was filed. From then on, it had actual notice.

In response, Plaintiffs attest that they have always consistently marked their own products, totaling approximately 33 million products sold over the 64 months from patent issuance to the filing of this case. Snap-On does not challenge Plaintiffs' own marking. Further, Plaintiffs counter that the two licensees without complete marking-period coverage are among five. In Plaintiffs' view, their overall rate of compliance, considering Plaintiffs and all licensees collectively, is sufficient to satisfy the statute. Specifically, Miller avers that Plaintiffs' licensees sold millions of additional licensed products covered by the '290 Patent, but that Plaintiffs themselves accounted for about 50% of the market share. The two licensees whose contracts freed them from marking obligations in September 2013 made up only around 11% of the market. Thus, say Plaintiffs, even if the two licensees immediately stopped marking when their obligation expired, the result would not mean that Plaintiffs had fallen short of whatever threshold is required for "substantially consistent and continuous" marking.

After reviewing the state of the record with respect to marking, the Court concludes that Plaintiffs have raised a jury question as to whether they and their licensees complied with their marking obligations. As a threshold matter, Miller's averments appear to raise triable issues as to compliance with Section 287(a). Indeed, in *Sentry Protection Products, Inc. v. Eagle Manufacturing Co.*, 400 F.3d 910, 918 (Fed. Cir. 2005), the Federal Circuit overturned the grant of summary judgment in the defendant's favor on constructive notice where the plaintiff "came forth with an affidavit stating that its products were marked, together with documents showing sales in that period." The court found that such an offering was "not so 'conclusory' or 'lacking in factual support'" as to permit a ruling as a matter of law. *Id.*

Like the plaintiff in that case, here Miller has averred that Plaintiffs undertook efforts to ensure marking compliance and provided sales data showing the volume of sales of marked and potentially unmarked products. These are broad claims, to be sure, but if they are believed, the jury could find that marking had consistently been occurring. And they are supported in some measure by other corroborating evidence, such as the averment of one licensee that it used its best efforts to comply with its marking obligations, the testimony of Selby and Milwaukee's corporate representative, both of whom testified that Milwaukee audited marking compliance, and at least one photo showing a properly marked product sold by a licensee during the relevant period. Without doubt, Snap-On has revealed some weaknesses in Plaintiffs' evidence, such as the undated photos, the irrelevant emails, and the lack of specifics as to Milwaukee's audit procedures. See *Hypertherm, Inc. v. Am. Torch Tip Co.*, No. 05-CV-373-JD, 2009 WL 57525, at *3 (D.N.H. Jan. 7, 2009). But the Court cannot say that Plaintiffs' evidence is so lacking that no reasonable factfinder could conclude that Plaintiffs' monitoring efforts were reasonable. See *K&K Jump Start/Chargers, Inc. v. Schumacher Elec. Corp.*, 52 F. App'x 135, 141 (Fed. Cir. 2002) (rejecting notion that "that bare evidence of a contractual provision requiring marking can never constitute reasonable efforts by the patentee to ensure that a licensee is marking the products properly," but affirming summary judgment where patentee "took no steps" to ensure compliance and proffered no evidence of properly marked products in the marketplace).

This is true notwithstanding the wrinkle added by the two errant licensees. Assuming they marked no products after their obligation to do so expired, there remains an overall 89% marking rate, which could still

suffice as “substantially consistent and continuous” marking. *See Maxwell*, 86 F.3d at 1111 (95% marking compliance, coupled with evidence of monitoring licensee’s marking efforts, sufficed to show compliance with Section 287(a)); *Funai Elec. Co. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1375 (Fed. Cir. 2010) (88%–91% marking rate was sufficient to comply with Section 287(a)); *Koninklijke Philips N.V. v. Zoll Med. Corp.*, Civil Action No. 10–11041–NMG, 2017 WL 2773834, at *5 (D. Mass. June 26, 2017) (even low end of disputed range of marking compliance, 65%, while not “a particularly high percentage,” was not so low as to warrant summary judgment); *Imagexpo, L.L.C. v. Microsoft Corp.*, 299 F. Supp. 2d 550, 554 (E.D. Va. 2003) (denying summary judgment on marking because “[w]hether [a patentee] consistently marked ‘substantially all’ of the patented products and whether the evidence is credible and reliable, appear to be classic issues for resolution by the trier of fact”).¹³ Consequently, Plaintiffs will be permitted to make that argument to the jury, and it will be for the jury to make the ultimate determination as to whether their evidence carries the day.

¹³Snap-On’s effort to distinguish these cases is unavailing. First, as to the district court decisions, Snap-On asserts that they are inapt because they concern marking by the patentee, not licensees. (Docket #216 at 19 n.9). But the marking requirements are undoubtedly less strict when licensees are involved. *Maxwell*, 86 F.3d at 1111. Accordingly, if a patentee can get away with marking compliance at a certain percentage, a licensee should be able to as well. Second, Snap-On claims that *Funai* is not relevant because it involved resale of unmarked goods, not sale by licensees. (Docket #216 at 19 n.9). Yet the Court of Appeals in that case did not draw the sort of distinction Snap-On proposes. To the contrary, it applied the same “rule of reason” approach as it would in a case involving a licensee. *Funai*, 616 F.3d at 1375. That analysis is used “when others than the patentee are involved in sales to the public,” regardless of their particular title or posture. *See id.*

Nor will the Court, on the state of record at this time, carve out any purported period of non-compliance with the statute. *See Tulip Computers Int'l B.V. v. Dell Computer Corp.*, Civil Action No. 00-981-KAJ, 2003 WL 1606081, at *15-16 (D. Del. Feb. 4, 2003); *Kimberly-Clark Worldwide, Inc. v. First Quality Baby Prods., LLC*, Civil No. 1:09-CV-1685, 2013 WL 1821593, at *4 (M.D. Pa. Apr. 30, 2013). This may be a reasonable course of action in a case where the evidence clearly shows initial compliance with marking obligations and a definite end to that compliance. In such a case, it could be argued that the failure to employ consistent and continuous marking might negate any previously achieved constructive notice. *See Am. Med. Sys.*, 6 F.3d at 1537-38 (observing that “[t]he world cannot be ‘put on notice’ if the patentee marks certain products, but continues to ship unmarked products. Therefore, [plaintiff] was not in full compliance with the marking statute while it continued to ship its unmarked products, which continued to mislead the public into thinking that the product was freely available.”) *Id.* But here, as noted above, disputes abound as to whether marking actually occurred in a consistent and continuous manner. Indeed, construing the facts in Plaintiffs’ favor, one might reasonably conclude that consistent marking by the other three licensees kept Snap-On on constructive notice despite any purported failure to mark by the two licensees whose marking periods expired. The Court is not equipped to resolve such disputes, so they must be left to the jury.

3.2 Plaintiffs’ Motion

3.2.1 Assignor Estoppel

The first of Plaintiffs’ arguments—assignor estoppel against Snap-On—was actually raised by Plaintiffs in their response to Snap-On’s motion, not in their own motion. However, because Plaintiffs bear the

burden to prove that assignor estoppel bars Snap-On's invalidity claims, the Court addresses it as though it was raised in Plaintiffs' own motion.

Assignor estoppel "is an equitable doctrine that prevents one who has assigned the rights to a patent. . .from later contending that what was assigned was a nullity." *Diamond Scientific Co. v. Ambico, Inc.*, 848 F.2d 1220, 1224 (Fed. Cir. 1988). The point of the doctrine is to prevent an assignor's windfall—that is, profiting from selling his rights in a patent and then profiting again by invalidating the patent, thereby regaining his ability to practice the invention freely. See *MAG Aerospace Indus., Inc. v. B/E Aerospace, Inc.*, 816 F.3d 1374, 1379–80 (Fed. Cir. 2016). Assignor estoppel also applies to those in privity with the assignor, and the determination of privity requires an equitable consideration of all relevant facts and circumstances. See *Shamrock Tech. v. Med. Sterilization, Inc.*, 903 F.2d 789, 793–94 (Fed. Cir. 1990). Application of the doctrine is within the "sound discretion" of the trial court. See *Carroll Touch, Inc. v. Electro Mech. Sys.*, 15 F.3d 1573, 1579 (Fed. Cir. 1993).

In this case, Plaintiffs contend that Snap-On and Moli have colluded to invalidate the patents-in-suit. It is undisputed that Milwaukee and Moli entered into an agreement in 2003 which provided for joint ownership of the invention at issue here. Moli assigned its rights in the invention to Plaintiffs in 2006. It is likewise undisputed that Moli itself is not violating any principle of assignor estoppel; it is not a party to this proceeding and has never tried to challenge the patents itself.

Plaintiffs' theory is that Snap-On is in privity with Moli and therefore barred by the same assignor estoppel that would prevent Moli's participation in this suit. Plaintiffs claim that Snap-On worked with Moli to create allegedly infringing battery cells for Snap-On's use in its products.

Further, Snap-On has been using former Moli employees, including Reid, Reimers, and von Sacken, to offer biased opinions and dig up confidential or damaging information from Moli on Snap-On's behalf. Additionally, Plaintiffs complain that communications between Moli and Snap-On's counsel show an effort to feed useful information for Snap-On to deploy against Plaintiffs in this action.

This theory does not hold water. But before describing its lack of merit, the Court must address another wrinkle here: Plaintiffs did not assert assignor estoppel in any prior pleading. The parties agree that assignor estoppel is an affirmative defense that must be pleaded. *See Semiconductor Energy Lab. Co., Ltd. v. Nagata*, 706 F.3d 1365, 1370 (Fed. Cir. 2013); Fed. R. Civ. P. 8(c)(1). They have now sought leave to amend their pleadings to include it, (Docket #220), but that motion was not filed until after the summary judgment deadline had passed. Thus, the Court has to consider not simply whether the defense is meritorious, but also whether Plaintiffs should be permitted to raise it at all.

The Court answers both those questions in the negative. A court may decide that a claim is futile, and therefore deny leave to amend, if it would not survive a motion for summary judgment. *Bethany Pharmacal Co. v. QVC, Inc.*, 241 F.3d 854, 861 (7th Cir. 2001); *Wilson v. Am. Trans Air, Inc.*, 874 F.2d 386, 392 (7th Cir. 1989). That is the case here. Despite Plaintiffs' suspicions and speculation that Snap-On and Moli are in cahoots, the relevant authorities set a far higher bar for finding that privity exists.

The Federal Circuit has explained that

[p]rivity, like the doctrine of assignor estoppel itself, is determined upon a balance of the equities. If an inventor assigns his invention to his employer company A and leaves to join company B, whether company B is in privity and thus

bound by the doctrine will depend on the equities dictated by the relationship between the inventor and company B in light of the act of infringement. The closer that relationship, the more the equities will favor applying the doctrine to company B.

Shamrock Techs., 903 F.2d at 793. Thus, the most common circumstance envisioned by the Court of Appeals for application of assignor estoppel is when an inventor himself assigns his rights away, then joins another firm and helps that firm infringe the patent and defend against the eventual lawsuit. See *Diamond Scientific*, 848 F.2d at 1225 (inventor who participated actively in patent application process and executed inventor's oath was estopped from challenging the patent after forming his own firm producing infringing products).

Of course, that did not occur here. Plaintiffs do not concede, and indeed vigorously oppose, the notion that any Moli employee is an inventor as to the patents-in-suit. Instead, the record reflects that only Moli the corporate entity had any ownership interest in the patents, and even that was joint with Plaintiffs. Thus, Snap-On's entreaties to former Moli employees are not immediately apparent as the sort of side-switching that assignor estoppel is meant to proscribe.¹⁴

¹⁴Plaintiffs suggest in their reply that Snap-On tried to collude with current Moli employees, including Tweten and a man named Paul Craig, (Docket #230 at 11), but it offers little evidence as to the nature of the interactions, and the Court will not speculate their argument into existence. Moreover, evidence regarding these individuals was provided for the first time in Plaintiffs' reply, which is not the proper place for new evidence to arise. *Studio & Partners v. KI*, No. 06-C-0628, 2008 WL 426496, at *6 (E.D. Wis., Feb. 14, 2008) ("[I]t should go without saying that a reply brief [] is hardly the correct vehicle for raising new arguments[.]") (citing *TAS Distrib. Co., Inc. v. Cummins Engine Co., Inc.*, 491 F.3d 625, 630-31 (7th Cir. 2007)).

Nevertheless, the privity inquiry is all-encompassing, so the lack of such an obvious connection between Moli and Snap-On is not fatal. But a holistic assessment of the circumstances surrounding Snap-On's dealings with Moli and former Moli employees do not permit an inference of privity. In *Shamrock Technologies*, a named inventor left his company and became a vice-president at another. *Id.* at 794. He then oversaw at this second company the development of the facilities and processes to manufacture infringing products. *Id.* The Federal Circuit found it important that the inventor did not become a mere run-of-the-mill employee at the second company; instead, "the undisputed facts establish[ed] [the company's] direct involvement of [the inventor] in [its] infringing operations. [The company] clearly availed itself of [the inventor's] 'knowledge and assistance' to conduct infringement." *Id.* (quoting *Mellor v. Carroll*, 141 F. 992, 994 (C.C.D. Mass. 1905)); *see also Stubnitz-Greene Spring Corp. v. Fort Pitt Bedding Co.*, 110 F.2d 192, 195 (6th Cir. 1940) (privity between assignor-inventor and company of which he was principal stockholder, president, and general manager).

By contrast, in a case cited by the Federal Circuit in *Shamrock*, the Ninth Circuit concluded that a mere contractual relationship as buyer and seller does not give rise to privity sufficient to support assignor estoppel. *U.S. Appliance Corp. v. Beauty Shop Supply Co.*, 121 F.2d 149, 151 (9th Cir. 1941). Instead, the level of financial interconnectedness required is usually much greater, including situations "in which the actual assignor almost envelopes the other entity," or "one entity [enjoys] financial control over the other." *See Earth Res. Corp. v. United States*, 44 Fed. Cl. 274, 284–87 (1999); *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 838–39 (Fed. Cir. 1991).

Snap-On's relationship with Moli falls well short of this standard. In 2006, after Moli was freed from an exclusivity agreement with Milwaukee, it contacted Snap-On to sell it battery cells. The two entities worked together to develop batteries customized for Snap-On's needs. That relationship ended around the end of 2012. Their mere contractual relationship as supplier and purchaser does not establish privity. Without doubt, Snap-On lacked the type of robust financial control over Moli that has supported a finding of privity in past cases.

Nor does the record substantiate Plaintiffs' claim that Snap-On improperly availed itself of an inventor's knowledge and assistance in attacking Plaintiffs' patents. First, Plaintiffs maintain that Moli and Snap-On set out to create infringing battery cells together, but Snap-On counters that Moli had a license to do so as part of its 2003 agreement with Milwaukee. *See* (Docket #217 ¶ 4). Plaintiffs offer no meaningful dispute, *see* (Docket #200 at 11 n.4), and so the development of customized battery packs for Snap-On does not appear to be problematic.

Second, as noted above, Plaintiffs consider their employees to be the only inventors. Thus, it makes little sense to accuse Snap-On of borrowing off of the inventors' knowledge when former Moli employees like Reid, Reimers, and von Sacken are, to Plaintiffs, not even to be counted among them. Moreover, none of these men has held positions of power at Snap-On or directed the development of infringing products.

At most, it appears each was compensated at standard consultation rates for testimony about the facts underlying this case, and von Sacken in particular collected pertinent documents available to him with Moli's permission. Plaintiffs have not raised a colorable inference that the witnesses' testimony and opinions are the result of collusion. If Plaintiffs

think they have a claim against Moli for allowing von Sacken to peruse and copy its documents, *see* (Docket #230 at 13), they have not asserted it, *see* (Docket #224-19 at 5) (PTAB ruling on Plaintiffs' motion for sanctions, holding that "even if [Moli] provided Dr. von Sacken with documents that, in fact, reflected [Milwaukee's] confidential information, that production would at most present an apparent breach of duty between [Moli] and [Milwaukee]"). Further, if Plaintiffs believe that Reid, Reimers, or von Sacken hold biased opinions, they can explore such matters on cross-examination. *Semiconductor Energy Lab. Co., Ltd. v. Yujio Nagata*, No. C 11-02793 CRB, 2012 WL 177557, at *5-6 (N.D. Cal. Jan. 23, 2012). Assignor estoppel, however, is too blunt an instrument for the situation presented.

Assignor estoppel is a doctrine meant to preserve fairness for the assignee of patent rights. It does so at the cost of suppressing competition. *Diamond Scientific*, 848 F.2d at 1125. It also deprives challengers of access to relevant evidence. *Checkpoint Sys.*, 412 F.3d at 1337. Mindful of these competing considerations, the Court finds that, on balance, Plaintiffs' assignor estoppel defense lacks sufficient basis in the record for a reasonable jury to conclude that it applies. There is, therefore, no reason to permit its incorporation into the case, especially in light of the late stage at which it was asserted and the distinct factual and legal questions such a defense would raise that are far afield from the patent infringement claims at issue. The Court will not deny Snap-On's motion for summary judgment on this basis, and Plaintiffs' motion for leave to amend its pleadings will be denied.

3.2.2 IPR Estoppel

Inter partes review ("IPR") is a procedure introduced by the AIA in which the PTAB may review the patentability of one or more claims in a

patent. *See* 35 U.S.C. §§ 311–319. A party may request that the PTAB institute IPR in order to establish that some identified claims are invalid under Sections 102 or 103. *Id.* § 311(a)–(b). The petitioner must rely “only on . . . prior art consisting of patents or printed publications.” *Id.* § 311(b). If the PTAB decides to institute IPR, the proceeding is conducted before a panel of three administrative patent judges. *Id.* §§ 6(a)–(c), 311. The panel then issues a decision, after hearing argument from both sides, as to whether the claims in question are invalid.

IPR was created “to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs” and “to create a timely, cost-effective alternative to litigation.” *Changes to Implement Inter Partes Review Proceedings, Post-Grant Review Proceedings, and Transitional Program for Covered Business Method Patents*, 77 Fed. Reg. 48680–01 (Aug. 12, 2012) (codified at 37 C.F.R. §§ 42.100 *et seq.*). For present purposes, the most important streamlining effect of IPR is to estop the unsuccessful petitioner from raising in a later district court action “any ground that the petitioner raised or reasonably could have raised during that inter partes review.” 35 U.S.C. § 315(e)(2).

Before analyzing which particular grounds are subject to IPR estoppel in this case, the Court will review the procedural history giving rise to the estoppel claim. The patents-in-suit have been subjected to three relevant sets of IPR petitions. First, on January 21, 2015, Chervon N.A., Inc. (“Chervon”) and others filed IPR petitions seeking to invalidate the patents as obvious under Section 103(a) based on a proposed combination of prior art references. On July 31, 2015, the PTAB granted these petitions and

instituted IPR. A year later, the PTAB issued a final written decision upholding the patentability of the patents.

Second, on May 6, 2015, Hilti Inc. (“Hilti”) filed a second round of IPRs against the patents-in-suit. The PTAB instituted these IPRs based on an obviousness argument under Section 103(a) that relied on a proposed combination of prior art references that was different than the proposed combination used in the first set of IPRs. Snap-on joined these IPRs as a co-petitioner. Once again, in its final written decision, the PTAB found Hilti and Snap-on failed to prove any claims were obvious and upheld the patentability of the patents.

Finally, on May 22, 2015, Snap-on filed a third round of IPRs challenging the patents as obvious based on different grounds than those raised in the prior two rounds. The PTAB once again instituted IPRs under Section 103(a), and once again confirmed the patentability of the patents.

Also pertinent here is Snap-On’s agreement to be bound by the January 2015 IPRs even though it was not a co-petitioner. On August 5, 2015, Snap-On renewed its motion to stay this litigation. (Docket #35). In the motion, Snap-on stated: “Although not a co-petitioner on the instituted IPRs, Snap-on agrees to be precluded in the instant litigation from challenging the validity of the Patents-In-Suit based on the prior art combinations in the instituted IPRs, upon issuance of a final written opinion in those IPRs by the Patent Trial and Appeal Board.” (Docket #36 at 3). On October 2, 2015, the Court granted the motion and stayed the case pending resolution of the IPRs, noting that “Snap-On has also agreed to be estopped in its litigation from asserting the prior art combinations used in the January 2015 IPR petitions after the USPTO issues its final written decisions.” (Docket #85).

As noted above, Section 315(e)(2) prohibits an unsuccessful IPR petitioner from asserting in the district court “that the claim is invalid on any ground that the petitioner raised or reasonably could have raised during that inter partes review.” 35 U.S.C. § 315(e)(2). There is one exception: a petitioner is not estopped from raising in the district court grounds that it requested be instituted in IPR but upon which the PTAB declined to institute IPR. *Shaw Indus. Group, Inc. v. Automated Creel Sys., Inc.*, 817 F.3d 1293, 1300 (Fed. Cir. 2016). This distinction appreciates that IPR has two phases. First, the petitioner files a petition asserting certain grounds, and the PTAB decides whether IPR should be instituted on one or more of those grounds, which in turn requires a finding that there is “a reasonable likelihood that the petitioner would prevail.” 35 U.S.C. § 314(a). Only once IPR is instituted upon certain grounds does the PTAB proceed to decide the merits of the petitioner’s invalidity contentions. *See In re Cuozzo Speed Tech., LLC*, 793 F.3d 1268, 1272 (Fed. Cir. 2015). Because a non-instituted ground is not and could not be raised *during* an IPR proceeding, Section 315(e)(2) does not bar such a ground from being raised later. *Shaw*, 817 F.3d at 1300; *see also HP Inc. v. MPHJ Tech. Inv., LLC*, 817 F.3d 1339, 1347 (Fed. Cir. 2016) (interpreting the analogous estoppel provision that applies to Patent Office proceedings, Section 315(e)(1), and concluding that “noninstituted [redundant] grounds do not become a part of the IPR”).

The parties dispute how far this exception goes. Plaintiffs assert that the exception to IPR estoppel explained in *Shaw*—non-institution of a ground for IPR—has two limitations. First, it only applies to non-instituted grounds when such ground was rejected for purely procedural reasons, such as redundancy, and not when the ground was refused as insufficient on its merits to warrant IPR. (Docket #188 at 11). Second, in Plaintiffs’ view,

estoppel operates to bar any non-petitioned ground that the petitioner had reasonably available to it, and therefore could have included in its petition, but chose not to. *Id.*

Several district courts have accepted Plaintiffs' position, finding that while these exceptions to the exception are not totally congruent with the Federal Circuit's quite literal reading of the statute in *Shaw*, they are important in order to further the efficiency-promoting purposes of IPR and deter selective presentation of grounds to the PTAB. See *Biscotti Inc. v. Microsoft Corp.*, Case No. 2:13-CV-01015-JRG-RSP, 2017 WL 2526231, at *7 (E.D. Tex. May 11, 2017); *Clearlamp, LLC v. LKQ Corp.*, No. 12-cv-2533, 2016 WL 4734389, at *8 (N.D. Ill. Mar. 18, 2016). Other courts have hewed to *Shaw* and *HP's* literal approach, finding that only grounds that were or could reasonably have been raised during IPR proceedings—that is, after the PTAB has instituted IPR as to certain grounds—implicate IPR estoppel. See, e.g., *Verinata Health, Inc. v. Ariosa Diagnostics, Inc.*, No. 12-cv-5501, 2017 WL 235048, at *3 (N.D. Cal. Jan. 19, 2017) (collecting cases).

The Court finds that, in the absence of greater clarity provided by the Federal Circuit on these issues, the better view is that recently espoused by Judge Amy St. Eve in *Oil-Dri Corp. of America v. Nestle Purina Petcare Co.*, No. 15-cv-1067, 2017 WL 3278915 (N.D. Ill. Aug. 2, 2017). First, she found that a plain reading of *Shaw* compels the conclusion that a non-instituted ground is not subject to estoppel, whatever the reason for its rejection. *Id.* at *4; *Douglas Dynamics, LLC v. Meyer Prods. LLC*, 14-cv-886-jdp, 2017 WL 1382556, at *5 (W.D. Wis. Apr. 18, 2017) (*Shaw* "makes the Federal Circuit's view of whether § 315(e) estoppel applies to non-instituted grounds crystal clear"). As she explained, the Federal Circuit has had opportunities to revisit *Shaw's* reasoning and has declined to do so. *Oil-Dri*, 2017 WL

3278915, at *4; *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1053 (Fed. Cir. 2017); *HP Inc.*, 817 F.3d at 1347. Further, while it is possible to draw distinctions between declining to institute IPR for procedural reasons or for merits-related failings, the fact remains that denial of an IPR petition is simply not an adjudication of an invalidity contention. *Oil-Dri*, 2017 WL 3278915, at *4. Holding otherwise would deny the petitioner a full and fair opportunity to litigate the petitioned but non-instituted ground. *See id.*; *Verinata*, 2017 WL 235048, at *3 (“[L]imiting IPR estoppel to grounds actually instituted ensures that estoppel applies only to those arguments, or potential arguments, that received (or reasonably could have received) proper judicial attention.”). Thus, a petitioned ground for which IPR was not instituted, for whatever reason, does not give rise to IPR estoppel.

However, the Court is persuaded by Plaintiffs’ other proposed limitation on the *Shaw* IPR estoppel exception relating to non-petitioned grounds. Judge St. Eve also persuasively reasoned in *Oil-Dri* that “[i]f a party does not include an invalidity ground in its petition that it reasonably could have included, it necessarily has not raised a ground that it ‘reasonably could have raised during. . . IPR.’” *Oil-Dri*, 2017 WL 3278915, at *8 (quoting 35 U.S.C. § 315(e)(2)). The Federal Circuit has not expressly considered this particular question, and so *Shaw* and the cases that follow it, which touch on non-instituted grounds only, do not foreclose such an approach. *Id.* at *7. Moreover, this approach is consistent with the purposes of the AIA, because it incentivizes petitioners to bring all of their invalidity claims before the expert judges of the PTAB in the most efficient manner possible. *Id.*

Indeed, though *Shaw*’s plain language prevents IPR estoppel being applied to non-instituted grounds, the Court can preserve some measure of

the policy goals animating the creation of IPR by holding that a petitioner is estopped from asserting invalidity contentions based on prior art that it could reasonably have included in its IPR petition but did not. *See Douglas Dynamics*, 2017 WL 1382556, at *4; *Biscotti*, 2017 WL 2526231, at *7. As Judge St. Eve observed, “while it makes sense that noninstituted grounds do not give rise to estoppel because a petitioner cannot—to no fault of its own—raise those grounds after the institution decision, when a petitioner simply does not raise invalidity grounds it reasonably could have raised in an IPR petition, the situation is different.” *Oil-Dri*, 2017 WL 3278915, at *8. The PTAB itself takes this view, too. *Great W. Cas. Co. v. Intellectual Ventures II LLC*, IPR No. 2016-01534, Paper No. 13, at 11–14 (PTAB Feb. 15, 2017) (“[A] petitioner makes an affirmative choice to avail itself of *inter partes* review only on certain grounds. That choice, however, comes with consequences, most prominently, that grounds petitioner elects not to raise in its petition for *inter partes* review may be subject to the consequences of Section 315(e)(1).”). In order for IPR to fulfill its mission of streamlining patent litigation in the district courts and promoting efficient dispute resolution, a petitioner cannot be left with the option to institute a few grounds for IPR while holding some others in reserve for a second bite at the invalidity apple once in the district court. *See Cobalt Boats, LLC v. Sea Ray Boats, Inc.*, No. 15cv21, 2017 WL 2605977, at *2–3 (E.D. Va. June 5, 2017) (“[T]he broad reading of *Shaw* renders the IPR estoppel provisions essentially meaningless because parties may pursue two rounds of invalidity arguments as long as they carefully craft their IPR petition.”); *Douglas*, 2017 WL 1382556, at *4 (“A patent infringement defendant does not have to take the IPR option; it can get a full hearing of its validity challenge in district court. If the defendant pursues the IPR option, it cannot expect to hold a

second-string invalidity case in reserve in case the IPR does not go defendant's way.”). “Estopping a party in such a situation is both fair—as the party could only blame itself—as well as common.” *Oil-Dri*, 2017 WL 3278915, at *9. Therefore, the Court finds that a petitioner is subject to IPR estoppel when it fails to raise those grounds that it “reasonably could have raised” in its IPR petition, which includes prior art that a “skilled searcher conducting a diligent search reasonably could have been expected to discover.” *Id.* (quoting *Clearlamp*, 2016 WL 4734389, at *7–8); *Douglas*, 2017 WL 1382556, at *5.

A final point to keep in mind here is the inherently limited scope of IPR. It can only be instituted on narrow grounds—anticipation and obviousness on the basis of prior art consisting of patents or printed publications. 35 U.S.C. § 311(b); *Synopsis, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1316 (Fed. Cir. 2016). Other types of arguments are in no way affected by IPR estoppel, since they cannot be raised in such a proceeding. These include, for example, derivation, inequitable conduct, and any other purpose for a reference not related to an anticipation or obviousness defense based on prior art consisting of patents or printed publications. To the extent any reference mentioned in this Part can be used to support another ground of relief not available to an IPR petitioner, it can be used for that purpose. *See* (Docket #206 at 11); *Douglas Dynamics, LLC v. Meyer Prods. LLC*, 14-cv-886-jdp, 2017 WL 2116714, at *2 (W.D. Wis. May 15, 2017) (explaining confusion as to what qualifies as a “ground” before the PTAB).

The Court does not pass judgment on the merit or admissibility of the references at issue here for any alternative purposes. Instead, it will remain focused on the relatively straightforward task at hand: categorizing the references based on whether they were part of an IPR petition and, if so,

whether IPR was instituted upon them, or if not, whether they could reasonably have been included. The Court will not address each reference in turn, as they too numerous for that sort of treatment. Rather, it will resolve the parties' disputes where they arise and let its guidance aid the parties in determining what is to happen with these references at trial.

First, and easiest, are the references that are not included in Snap-on's experts' invalidity reports or its summary judgment motion and, according to Snap-on, "are therefore no longer being relied on by Snap-on and no longer at issue." (Docket #206 at 12). The Court need not and does not opine on whether estoppel bars references which Snap-On has withdrawn.

Second are those upon which IPR was instituted. *See id.* at 11. These are clearly subject to estoppel, notwithstanding Snap-On's contention that some of these references continue to be asserted only as an offer of proof in the event the PTAB's IPR decisions are overturned on appeal to the Federal Circuit. The PTAB's decisions are final unless and until reversed. Furthermore, any subset or alternative combination of the instituted references is barred, since such subsets or combinations undoubtedly could have been raised, but were not, during IPR proceedings. *Biscotti*, 2017 WL 2526231, at *7–8; *Verinata*, 2017 WL 235048, at *3. Snap-On does not attempt to resist this interpretation of the instituted-grounds principle, nor does it point to any portion of any PTAB decision expressly declining to consider a subset or alternative combination of references, as was the case in *Oil-Dri*. *Oil-Dri*, 2017 WL 3278915, at *5.¹⁵

¹⁵While subsets and alternative combinations of *instituted* grounds are subject to IPR estoppel, the Court appreciates and accepts Snap-On's position that to the extent references are being relied upon in combinations that could not have

Third, for the reasons stated above, the Court does not find that IPR estoppel bars any grounds petitioned but not instituted in the relevant IPRs. *See* (Docket #206 at 11). As the Court has explained, a straightforward application of *Shaw*, coupled with concerns about giving Snap-On one fair chance to fully litigate its invalidity contentions, require that estoppel not reach these grounds, regardless of the PTAB's reasons for refusing to institute IPR. *Oil-Dri*, 2017 WL 3278915, at *4.¹⁶

Finally, there are the non-petitioned grounds which Plaintiffs claim were reasonably available to Snap-On. This includes both (1) additional grounds for invalidity that could have been asserted based on the references included in the petition and (2) grounds based on references not mentioned at all in the IPR petitions. The former are clearly barred, as Snap-On was indisputably in a position to assert all potential arguments based on a single reference, and its choice to assert some and not others falls within the scope of IPR estoppel. *Douglas*, 2017 WL 2116714 at *2 (“[I]f the new theory relies on different, uncited portions of the prior art, attacks

been raised in an IPR petition—for instance, if some of the instituted references are now being combined with references that are physical specimens, not printed publications or patents—those combinations are not barred. *See* (Docket #216 at 18); *Advanced Micro Devices, Inc. v. LG Elec., Inc.*, Case No. 14-cv-01012-SI, 2017 WL 2774339, at *6 (N.D. Cal. June 26, 2017).

¹⁶The parties dispute whether each and every Saft reference mentioned by Snap-On was petitioned and not instituted. *See* (Docket #212 at 9–10); (Docket #206-2 at 4–6). Snap-On argues that this is so, on the understanding that anything petitioned and not instituted will still be available to them. Plaintiffs disagree, contending that only the reference *Medium Prismatic lithium-ion batteries*, Saft Battery Co., Summer ed. 2001, was petitioned. The records from the IPR proceedings bear out Plaintiffs' view. *See* (Docket #191-31, #191-32, #191-33). Thus, only that lone Saft reference is not estopped by reason of non-institution. Whether the other Saft references were reasonably available to Snap-On, and therefore should have been petitioned, is addressed below.

different claim limitations, or relies on substantially different claim constructions, then the new theory is tantamount to a new invalidity ground, and the court will treat it like a non-petitioned ground subject to estoppel.”).¹⁷

For the second group—references never used at all in any IPR petition—Snap-On attempts to justify the fact that these references were not petitioned on several grounds, including: (1) some are not patents or printed publications; and (2) some were not “reasonably available” prior to filing the IPR petitions. (Docket #206 at 11). The Court will evaluate these contentions below, noting parenthetically that IPR estoppel applies to any other reference listed in the parties’ charts, *see* (Docket #206-2), which did not make its way into an IPR petition and for which Snap-On offers no excuse or an excuse different from those above. This includes, for example, the contention that a reference will be used only for “background” information or that it could be used for another, alternative defense that could not be raised in IPR proceedings. Those points are what they are, but the Court is only concerned here with IPR estoppel as to each reference. As Snap-On itself admits, these references “are not being relied on in combinations with other references as grounds for invalidity.” (Docket #206 at 18). This makes them irrelevant in the present inquiry.

First, Snap-On is correct that IPR estoppel bars nothing except prior art consisting of patents and printed publications. The text of Section 311 is unmistakable: “A petitioner in an inter partes review may request to cancel

¹⁷This principle works to exclude, for example, reference to Linden, despite Snap-On’s assertion that it plans to use Linden for a different purpose than that for which Chervon used it during IPR. *See* (Docket #212 at 7). Chervon made a strategic choice to assert certain matters within Linden and Snap-On does not try to renege on its agreement to be bound thereby.

as unpatentable 1 or more claims of a patent only on a ground that could be raised under section 102 or 103 *and only on the basis of prior art consisting of patents or printed publications.*" 35 U.S.C. § 311(b) (emphasis added). Thus, any other types of prior art references do not qualify. *Douglas*, 2017 WL 1382556, at *1 n.1.

In this connection, Snap-On wishes to use several physical specimens of Moli battery cells and packs, as well as battery cells and packs from other manufacturers. Plaintiffs complain that Snap-On in fact will only rely on written descriptions of those specimens. (Docket #212 at 10). To the extent these written materials fall within the scope of Section 311(b), they are of course affected by IPR estoppel. Snap-On cannot skirt it by purporting to rely on a device without actually relying on the device itself.

Yet Plaintiffs go further, claiming that even the physical specimens should be estopped, as a diligent searcher, presented with a particular physical device, could be expected to locate the underlying printed publications. The Court is not convinced that the principle of excluding non-petitioned grounds should be extended so far, given the clear limitation of Section 311(b) to written materials. Indeed, because of the potential problems with marking a given device with the applicable patent numbers, *see supra* Part 3.1.2, it is not at all clear that Snap-On could be expected to locate associated printed publications using a physical device. Thus, the Court concludes that, at least on the facts of this case, Plaintiffs have not met their burden to show that a skilled searcher's diligent search would uncover the underlying printed publications for the physical devices in question. *Clearlamp*, 2016 WL 4734389, at *9; *Kennedy v. United States*, 965 F.2d 413, 417 (7th Cir. 1992) ("The burden of proof is on the party claiming estoppel.").

For the same reasons, the Court finds that IPR estoppel should not bar assertion of several videos as references. These videos depict the operation of the Moli prototype packs. First, videos do not have a printed component and therefore do not qualify under Section 311(b). *See Diomed v. Angio Dynamics, Inc.*, 450 F. Supp. 2d 130, 142 (D. Mass 2006) (“The definition of ‘printed’ cannot be stretched to include a presentation which does not include a paper component or, at minimum, a substitute for paper such as the static presentation of slides.”) (citing *In re Klopfenstein*, 380 F.3d 1345 (Fed. Cir. 2004)). Additionally, like the Moli cells, the Court does not believe that a diligent searcher, faced with the videos, could reasonably be expected to unearth underlying written materials. Plaintiffs have not carried their burden to show as much. *Clearlamp*, 2016 WL 4734389, at *9.

Next, Snap-On wants to use two PowerPoint presentations—the Bosch 24V Power Tool Presentation and the von Sacken Power 2000 Presentation—because it contends that they were never published or made public. (Docket #206 at 15). Snap-On argues that no diligent researcher, including even Cardinal Intellectual Property (“Cardinal IP”), an intellectual property services company retained by Plaintiffs with searching capabilities for prior art references, was able to find these presentations. Plaintiffs note that no search was performed for them because it believed that Snap-On had actual possession of them prior to the filing of its IPR.

As to the von Sacken presentation, this is true. While Snap-On says that it did not receive a copy of the presentation until September 2015, it cites no evidence in support of that belief. (Docket #207 ¶ 24); Fed. R. Civ. P. 56(c)(1). Moreover, it admits that it received a certain batch of documents from Plaintiffs in May 2015 that included the presentation. *Id.* ¶ 9; (Docket #212 at 7 & n.4). Thus, the Court need not concern itself here with what a

reasonable search would show; Snap-On had this presentation in time to include it in the IPR petition.

The result is different for the Bosch presentation, as this was not produced until October 1, 2015, many months after Snap-On filed its IPR petition. Even assuming that Snap-On filed the presentation during IPR proceedings, the inquiry here is whether it had the presentation reasonably available to it prior to petitioning the PTAB. If Snap-On simply did not have and could not reasonably have obtained the document before that time, it cannot be said that they made a strategic choice not to include it in the petition which should now give rise to estoppel. *See Oil-Dri*, 2017 WL 3278915, at *9. Given that Plaintiffs produced no evidence of whether a diligent searcher could locate the Bosch presentation, (Docket #212 at 9 n.9), the Court finds that IPR estoppel should not apply to it.

Finally, there are several written references that implicate the reasonableness of Cardinal IP's searches. First, and easiest, are Nagyszalaczy and the remaining Saft references, *see supra* note 16, which Plaintiffs admit were not found. Given their own failure to locate these references, the Court cannot say that the evidence shows that Snap-On should have been able to. On the other hand, Bailey and White were actually found, but Snap-On says that the searches were unfair, being crafted with the benefit of hindsight. Snap-On provides no specific evidence of how the searches were skewed; instead, it proffers only its attorneys' speculation that things could have been done differently. *See* (Docket #207 ¶¶ 26–27). This is not enough, and the Court finds that these and the other references Cardinal IP actually located, to the extent they are not estopped for some other reason, should be subject to IPR estoppel.

3.2.3 Inequitable Conduct

Plaintiffs next seek dismissal of Snap-On's inequitable conduct defense. Snap-On has alleged that Plaintiffs made material misrepresentations or omissions to the PTO during prosecution of the '290 Patent and its parent patent, and that, as a result, the '290 Patent is unenforceable.

The Court has addressed these contentions before, though in a slightly different context. In May of this year, in a now-dismissed case brought by Plaintiffs against another alleged infringer, the Court denied the defendant's motion to compel production of documents based on the crime-fraud exception to the attorney-client privilege. *Milwaukee Elec. Tool Corp. v. Chervon N.A., Inc.*, No. 14-cv-1289-JPS, 2017 WL 2312905, at *3 (E.D. Wis. May 26, 2017). In that motion, the defendant, Chervon, claimed that Plaintiffs had committed fraud on the PTO during patent prosecution, and that certain related documents should therefore not be entitled to protection under the attorney-client privilege. *See id.* The Court disagreed, finding that the alleged misstatements and omissions did not rise to the level of intentional deception. *Id.*

Though the Court was tasked with applying a different legal standard in resolving that motion, the operative facts are quite similar to those presented in this case. In fact, the two bases Snap-On proffers for its inequitable conduct defense are narrower and more focused than those proffered by Chervon, and so can be more easily summarized.

The first allegation of misconduct concerns Gary Meyer's 2009 declaration, discussed above, regarding testing the first Moli prototype battery packs he received in September 2001. According to Snap-On, while Meyer submitted some of the data accumulated through his testing to the

PTO, he omitted other, material portions of it, in order to support his narrative that the prototypes were failures. For instance, Snap-On accuses Meyer of providing evidence of the packs' failure during the demanding circular saw application while failing to provide data "showing the tool in operation in less demanding applications like a drill." (Docket #206 at 20). Plaintiffs counter that any such data was immaterial in light of the 57 total pages of testing provided to the PTO during prosecution of the '290 Patent. Further, Meyer purportedly failed to give fulsome descriptions of the tests in which the packs performed nearly as well as the NiCd packs to which they were being compared, including the cutting test and pulsed discharge test. Snap-On alleges a smorgasbord of misstatements and omissions, but these suffice to give a flavor of their contentions. *See* (Docket #167 at 21–32); (Docket #207 ¶ 64).

Further, Meyer purportedly contradicted his own finding that the packs were failures when he wrote in his October 17, 2001 email that his second cutting test revealed that the packs "did much better than their published specification sheet [and] ran some of our tools OK." (Docket #209-54 at 2). Meyer concluded that the cells were promising enough that it was "definitely worth doing some further investigation." *Id.* Similarly, despite the allegation that the packs were failures, Selby wrote an email stating that the Moli prototype packs "perform outstanding – even in our toughest application, the circular saw." (Docket #187-20 at 2). Selby also noted that the batteries experienced a voltage drop-off when placed in a "steady laboratory load" at 20 amps, but that when "use[d] in actual applications, the chemistry of the cell is able to deliver consistent power output." *Id.* Selby also noted that the "'good' results so far are with cells that

are not even built for high power drain,” which gave him “great optimism for the next samples.” *Id.*

Selby later explained his enthusiasm at his deposition, noting that at the time, he thought Li-ion batteries were a long way off from being successful. Thus, he was encouraged to pursue further development in light of promising early results. In fact, he contended that although the packs failed the “standard protocol”—the constant-current discharge test—the other tests, such as the circular saw cutting test, showed promise. (Docket #203-2 135:22–139:22). His email was written to ensure that the new packs were not dismissed out of hand.

Shortly after Milwaukee tested the Moli prototype packs, it began working with Moli to plan additional testing and also made sales projections based on the potential plan to use Moli battery packs in its power tools. Milwaukee scheduled a special two-hour meeting for October 31, 2001 of twenty top Milwaukee executives, including Meyer, to discuss the opportunity for Milwaukee presented by the Moli battery cells. The meeting notice attached over 50 pages of Moli-generated technical materials explaining Li-ion battery cells. In a presentation explaining Milwaukee’s Li-ion battery program, Milwaukee included a slide that displayed the test results from the original cutting tests performed using the Moli prototype packs. This slide noted that the “[o]riginal test. . . showed the potential of the Spinel cell.” (Docket #209-61 at 4).

Additionally, Snap-On claims that Plaintiffs did not explain to the PTO that the initial Moli prototype packs were known to them to be suited for low-power applications. They failed to apprise the PTO that the testing failures could have been due to the lower power of the prototype packs.

The second aspect of Snap-On's inequitable conduct theory relates specifically to the later-developed, higher-power cells Moli provided to Milwaukee. According to Snap-On, Plaintiffs failed to disclose those higher-power cells to the PTO although, in Snap-On's view, they qualified as prior art under Section 102(f)—the derivation provision already considered above. The theory here is that although the information and later prototypes Milwaukee received from Moli were confidential, they nevertheless can form a part of an obviousness analysis under Section 103. *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1401 (Fed. Cir. 1997).¹⁸

¹⁸In their motion, Plaintiffs proceed through several other allegations of inequitable conduct that recurred throughout this and related litigation. These include alleged misstatements by Meyer in a declaration to the PTO in 2007 about the viability of lithium-ion technology, failure to disclose the Moli prototype packs in 2007 in connection with prosecution of the '585 Patent, and failure by Meyer and patent prosecution counsel Carlo Cotrone to truthfully and completely disclose the test results for the prototype packs in 2009, including their purported misrepresentations about the packs being failures. (Docket #188 at 21–28). Review of Snap-On's operative answer reveals that only the final of these grounds is meaningfully asserted as a basis for its inequitable conduct defense. *See* (Docket #167 at 21–32). In its opposition, moreover, Snap-On does not mention the 2007 declaration at all, but focuses on the allegations that Meyer misrepresented his test results in his 2009 declaration. (Docket #206 at 23–24). Snap-On also adds another potential ground, as has been noted, regarding failure to disclose the higher-power Moli cells during patent prosecution. *Id.*

The Court will address only those grounds, as it was Snap-On's task to present arguments to preserve this defense, *see Gold v. Wolpert*, 876 F.2d 1327, 1333 (7th Cir. 1989), and the Court has already found that the allegations not addressed by Snap-On did not involve material misrepresentations or omissions and were not made with the intent to deceive, *Milwaukee Elec. Tool*, 2017 WL 2312905, at *3. Put briefly, the Court reiterates its earlier finding that "Meyer's and his colleagues' beliefs about industry trends and technological development" with respect to Li-ion batteries "are not facts." *Id.* They are, therefore, not capable of being false. Similarly, the failure to disclose the Moli packs during the '800 Application was premised on voltage differences, and there is insufficient evidence to conclude that Plaintiffs did not honestly believe that the voltage differences were enough to warrant nondisclosure. *Id.* At a minimum, it cannot be said that deceptive intent

The Court's prior discovery ruling informs its conclusion that the inequitable conduct defense cannot proceed on these facts, even when viewed in the light most favorable to Snap-On. To prevail on this defense, the accused infringer must prove that the applicant misrepresented or omitted material information with the specific intent to deceive the PTO. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1287 (Fed. Cir. 2011). Both elements—intent and materiality—must be proven by clear and convincing evidence. *Id.*

Moreover, the requisite intent is difficult to establish; even gross negligence does not qualify. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876 (Fed. Cir. 1988). Rather, the accused infringer must prove by clear and convincing evidence that the applicant knew of the reference, knew that it was material, and made a deliberate decision to withhold it. *Therasense*, 649 F.3d at 1290. And while the requisite intent may be inferred from circumstantial evidence, this is only permissible where the specific intent to deceive must be “the single most reasonable inference able to be drawn from the evidence.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008). Further, the Court of Appeals has emphasized that “[i]ntent and materiality are separate requirements,” so a weak showing of intent cannot be salvaged by a strong showing of materiality, or vice versa. *Therasense*, 649 F.3d at 1290. Even once the defendant establishes these elements, the district court must still weigh the equities to determine whether the applicant's conduct before the PTO warrants rendering the entire patent unenforceable. *Star*, 537 F.3d at 1365.

is “the single most reasonable inference able to be drawn from the evidence” with respect to these alleged instances of untruthfulness. *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 537 F.3d 1357, 1366 (Fed. Cir. 2008).

The Court must also be mindful that the inequitable conduct defense is not well-taken by the Court of Appeals. Because of its far-reaching consequences, it has been called the “atomic bomb of patent law.” *Therasense*, 649 F.3d at 1289 (quoting *Aventis Pharma S.A. v. Amphastar Pharm., Inc.*, 525 F.3d 1334, 1349 (Fed. Cir. 2008) (Rader, J., dissenting)). It is a nearly universal feature of patent litigation, and has been derided as “an absolute plague,” since “[r]eputable lawyers seem to feel compelled to make the charge against other reputable lawyers on the slenderest grounds, to represent their client’s interests adequately[.]” *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988).

The first and most glaring problem with Snap-On’s inequitable conduct defense, as the Court observed in making its discovery ruling, is that it depends, in large measure, on the Court’s adopting its construction of the 20 Amp Limitation. *Milwaukee Elec. Tool*, 2017 WL 2312905, at *5 (“Chervon’s motion boils down to a substantive disagreement with Plaintiffs about the capabilities of the Moli packs, layered atop a claim construction dispute.”). That is, in order to find the initial Moli prototypes were successful, thus rendering Meyer’s statements to the contrary untruthful, the Court would have to accept Snap-On’s interpretation of the 20 Amp Limitation. Of course, the Court has adopted Plaintiffs’ proposed construction of that and the other disputed claim terms. This pulls the rug sharply from underneath Snap-On’s position.¹⁹

¹⁹It must also be appreciated that Snap-On faces a higher burden to prove inequitable conduct than Chervon did in trying to establish the crime-fraud exception. The crime-fraud exception required only a *prima facie* showing of fraud, whereas the inequitable conduct defense sets a clear-and-convincing standard of proof. See *Avnet, Inc. v. Motio, Inc.*, Case No. 12 C 2100, 2015 WL 5474435, at *4 (N.D. Ill. Sept. 16, 2015) (explaining the higher burden employed in addressing an

From this starting point, the Court will address Snap-On's theories of inequitable conduct. First is the claim that Meyer deliberately misrepresented the results of his testing to the PTO in his 2009 declaration. This contention is without merit, as it is in reality only Snap-On's dissatisfaction with Meyer's interpretation of the test results. If Meyer did not explain that the cutting test was the most demanding test performed, it could have been because he believed—as does the Court after claim construction—that the packs' failure on the constant-current discharge test was enough to render them inadequate. The harshness of the cutting test, then, makes no difference. The same conclusion justifies his choice to give short shrift to some information about other tests and testing parameters. As this Court found once before, “while Meyer may have stated his case strongly to the Patent Office, there is insufficient evidence to conclude that he actually misrepresented facts or intended to deceive the patent examiners.” *Milwaukee Elec. Tool*, 2017 WL 2312905, at *3. To the extent Snap-On believes that the second cutting test, performed on October 17, 2001, the driver drill test, or any other test results were withheld, it simply does not matter, as the constant-current test failure was both a necessary and sufficient prerequisite for Meyer's ultimate conclusion. Moreover, it is undisputed that Meyer provided the constant-current test results in to the PTO, leaving the patent examiner free to disagree with Meyer's assessment of that test.

inequitable conduct defense). Thus, as will become clear below, Snap-On's attempt to meet this higher burden using largely the same facts which the Court found inadequate to support application of the crime-fraud exception is doomed to failure.

Nor is there clear and convincing evidence that these statements were made with the intent to deceive. Snap-On contends that while Meyer was excited about the prospects of the Moli prototypes in contemporaneous conversations with his coworkers, his 2009 declaration was gloomy in outlook. But these two positions are not inconsistent, as Meyer was permitted some optimism about the future of his work with Moli while still appreciating that the prototype packs were not the end of the road. His contemporaneous statements, along with those of his colleagues like Selby, simply do not lead to the inference of deceptive intent, much less make that inference the most reasonable one that could be drawn. *Therasense*, 649 F.3d at 1290.

Snap-On's late-coming addition to its inequitable conduct defense—that Plaintiffs were required to disclose the later-developed Moli cells, but did not—merits little mention. The Court's findings as to derivation establish that the later-developed Moli packs were not prior art under Section 102(f) and that, concomitantly, there was no material omission in the failure to disclose them to the PTO. *See supra* Part 3.1.1. Consequently, even when the facts are viewed in Snap-On's favor, the demanding standards applicable to inequitable conduct require dismissal of this defense.

3.2.4 Validity

Plaintiffs contend that summary judgment is appropriate on Defendants' invalidity defense under 35 U.S.C. § 112. An invalidity defense must be proved by clear and convincing evidence. *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 95 (2011).

In order to be valid, a patent must satisfy three requirements. First, the patent must conclude with claims "particularly pointing out and

distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112. This is the definiteness provision discussed extensively above in the context of claim construction. As the Court has explained, “a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus*, 134 S. Ct. at 2124 (2014). The Court has found that the patents-in-suit are not indefinite, *see supra* Part 2, and so this requirement is satisfied.

Second, a valid patent must have a sufficient written description, which demonstrates that the inventors “had possession of the claimed subject matter as of the filing date.” *Ariad Pharma., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). The focal point of the written description requirement is whether the inventor actually invented the invention claimed. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562–63 (Fed. Cir. 1991). But because of the difficulty in reaching into the inventors’ minds to learn what they knew, the test is instead “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Ariad*, 598 F.3d at 1351. Evidence from outside the specification can be relevant for “the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.*

Here, the inventors claim “a plurality of . . . battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps,” and the specification provides that “the battery pack 30 can supply an average discharge current that is equal to or greater

than approximately 20 A, and can have an ampere-hour capacity of approximately 3.0 A-h.” (Docket #187-1 at 76–77). These are sufficient descriptions, notwithstanding the belief of Snap-On’s expert, Quinn Horn, that the phrase “entire rated capacity” should be present somewhere. *See* (Docket #209-2 ¶¶ 107–109). The patent defines the discharge current required of a pack and the pack’s rated capacity; a skilled artisan would read these together and conclude that the discharge current is required over the entire rated capacity of the pack. Snap-On’s half-hearted argument on this point fails to raise a genuine question as to whether a reasonable jury could find clear and convincing evidence of the specification’s failure to inform a skilled artisan that the patentee invented what is claimed. *See Univ. of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916, 923 (Fed. Cir. 2004).

Finally, a patent must be enabled, meaning that “the specification must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.” *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996). Unlike the written description requirement, which requires a fulsome description of all elements of the claimed invention, the enablement requirement is less rigorous on the level of completeness required because it operates against the backdrop of the skilled artisan. That is, because a person of skill in the art already possesses substantial knowledge about the field, the disclosure need not explain the practice of the invention from scratch. *Falko–Gunter Falkner v. Inglis*, 448 F.3d 1357, 1365 (Fed. Cir. 2006) (“[A] patent need not teach, and preferably omits, what is well known in the art.”) (quotation omitted). To be sufficiently enabling, the disclosure need describe only what is new about the invention in sufficient detail so that one of skill in the art can combine the disclosure with the knowledge already known in the

field and have enough information to practice the invention without undue experimentation. *See United States v. Telectronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988).

Plaintiffs have shown that the patents-in-suit are enabled. Snap-On first alleges that the specification does not explain how to construct a pack that will enable a 20-amp constant-current discharge over its entire rated capacity. However, the Court agrees with Plaintiffs that the specification “guides one of ordinary skill in the art to view the 20 Amp Limitation consistent with the power requirements that existed at that time for hand-held power tools.” (Docket #212 at 12). The exemplar disclosures would permit a person of ordinary skill in the art to link the discharge current to the hand-held power tools disclosed. Snap-On cannot meet its burden to show that “undue experimentation” would be required in this instance.

The more hotly disputed of Snap-On’s non-enablement contentions is that the specification fails to enable the undefined upper limit of the asserted claims. (Docket #206 at 28). Here, Snap-On reasons that there is no enablement when the claims specify 20 amps of discharge current or greater and do not define the uppermost limit. *Id.* But whatever the actual upper limit may be, this claim has not been construed to expressly cover up to an infinite discharge current. *See* (Docket #190-40 at 15); *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d 1377, 1381 (Fed. Cir. 2012). Thus, while a specification “must enable one of ordinary skill in the art to practice the full scope of the claimed invention,” *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003), Snap-On’s argument fails because it tries to set up an impossible goal which in reality is not claimed. The skilled artisan would understand that the nature of the cells would create a natural upper limit to the potential discharge current, and so disclaiming an infinite

discharge current would have been unnecessary. *Falko–Gunter Falkner*, 448 F.3d at 1365. Thus, Snap-On’s non-enablement arguments are without merit, and, consequently, the Court must dismiss its invalidity defense under Section 112.

3.2.5 Anticipation

Plaintiffs’ final argument requests a ruling that the 15A Moli prototype cells provided to Meyer in September 2001, as well as the improved cells that followed,²⁰ are not anticipatory under 35 U.S.C. § 102(a) or (b), and that Plaintiffs’ invention was not derived from them under Section 102(f) or (g).

If the claimed invention was “described in a printed publication” either before the date of invention, 35 U.S.C. § 102(a), or more than one year before the U.S. patent application was filed, *id.* § 102(b), then that prior art anticipates the patent. To anticipate a claim, a single prior art reference must expressly or inherently disclose each claim limitation. *Celeritas Techs., Ltd. v. Rockwell Int’l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). To answer this question, the Court must consider the prior art against the properly construed claim terms. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1335 (Fed. Cir. 2002).

As mentioned several times already, under Section 102(f) a party must establish that the inventor “did not himself invent the subject matter sought to be patented[.]” 35 U.S.C. § 102(f). This requires proof of “both

²⁰In their motion, Plaintiffs initially sought a ruling only as to the 15A prototype cells. (Docket #188 at 29–30). Yet Snap-On explained in its opposition that its anticipation theory includes both those packs and the later Moli cells. (Docket #206 at 29). Plaintiffs note in reply that their arguments about the failings of the initial prototypes apply with equal force to the later-developed cells. (Docket #212 at 18–19). The Court agrees, and its ruling therefore extends to all such cells.

prior conception of the invention by another and communication of that conception to the patentee.” *Creative Compounds, LLC v. Starmark Labs.*, 651 F.3d 1303, 1313 (Fed. Cir. 2011). To invalidate a claim under 35 U.S.C. § 102(g), a party must show that “before such person’s invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it.” 35 U.S.C. § 102(g). Like derivation, this defense requires a showing of prior conception. *Creative Compounds, LLC*, 651 F.3d at 1312. Conception must encompass all limitations of the claimed invention. *Singh*, 217 F.3d at 1340.

For reasons already detailed at length in this Order, the Court agrees with Plaintiffs that the Moli cells—both the initial 15A cells and the later-developed cells—do not anticipate the subject invention, nor was the invention derived from them. *See supra* Part 3.1.1. First, Moli’s provision of battery cells does not constitute a battery pack; the cells are merely a component part of the ultimate invention and therefore cannot have disclosed all the limitations of the invention. Second, as explained above, Milwaukee created the packs and had at least some joint involvement with Moli in developing the battery cells. Much of Snap-On’s position rests upon its own preferred construction of the 20 Amp Limitation, *see* (Docket #206 at 29), and that construction having been rejected, little additional effort need be expended to dispose of the defense theories that rely upon it. As a result, Snap-On’s anticipation and derivation defenses based on the Moli cells will be dismissed.

4. CONCLUSION

For the reasons stated above, the Court adopts Plaintiffs’ proposed construction of the disputed claim terms. The Court further finds that Snap-On’s motion for summary judgment should be denied in its entirety, and

that Plaintiffs' motion should be denied as to assignor estoppel, granted in part as to IPR estoppel, and granted in full as to Snap-On's anticipation, derivation, invalidity, and inequitable conduct defenses.

Accordingly,

IT IS ORDERED that Plaintiffs' motion for summary judgment (Docket #185) be and the same is hereby **GRANTED IN PART** and **DENIED IN PART** as stated herein;

IT IS FURTHER ORDERED that Defendant's motion for summary judgment (Docket #183) be and the same is hereby **DENIED**;

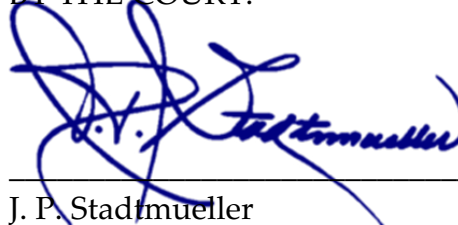
IT IS FURTHER ORDERED that Plaintiffs' motion for leave to file its opening claim construction brief (Docket #177) be and the same is hereby **GRANTED**;

IT IS FURTHER ORDERED that Plaintiffs' motion for leave to amend their answer (Docket #220) be and the same is hereby **DENIED**; and

IT IS FURTHER ORDERED that the parties' motions to restrict certain documents filed in connection with the instant motions (Docket #176, #180, #181, #198, #204, #211, #215, #219, #222, #229), which were designated confidential pursuant to the Court's protective order, be and the same are hereby **GRANTED**.

Dated at Milwaukee, Wisconsin, this 22nd day of September, 2017.

BY THE COURT:

A handwritten signature in blue ink, appearing to read "J. P. Stadtmueller", is written over a horizontal line.

J. P. Stadtmueller
U.S. District Court